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ABSTRACT

The chronology is a comprehensive bibliography covering a variety of selected literature, reports, policy instruments, and significant events affecting federal scientific and technical information (STI) from 1945 to 1990. It includes some publications and events of historic interest that relate to the evolution of aerospace and aerospace knowledge diffusion. The chronology is descriptive and is designed to provide both an overview of the field and access to primary sources. Two approaches were used in compiling the chronology, both placing aerospace knowledge diffusion in the context of STI resulting from federally-funded National Aeronautics and Space Administration/Department of Defense (NASA/DoD) research and development. The first focuses on the production, transfer, and use of federally-funded STI, and places STI within the context of information policy, information security classification, information technology, intellectual property, national security, and technology transfer. The second focuses on federal attempts at nurturing technological innovation and stimulating economic competitiveness, and places STI within the context of federal science and technology policy and federal economic, tax, and trade policy. Each of the 512 entries has been given an item number and items are arranged by columns. To provide an overview of federal STI development, the entries are generally arranged by date of publication and event. Information provided for each entry includes the year of the event, report, or policy instrument; the author; bibliographic number; sponsor; and comments about its major findings, recommendations, or significance. The ISBN number is provided for books and complete citations are given for journal articles. To increase utility and access, the chronology has seven appendices: a chronology of the Defense Technical Information Center (DTIC); chronology of the National Technical Information Service (NTIS); chronology of NASA STI; Index of Executive Orders; Index of Public Laws; Index of Popular Common Names for Studies; and A Glossary of Acronyms. (DB)

ED345702

NASA/DoD Aerospace Knowledge Diffusion Research Project

NASA Technical Memorandum 101662

Report Number 11

Chronology of Selected Literature, Reports, Policy Instruments, and Significant Events Affecting Federal Scientific and Technical Information (STI) in the United States

1945-1990

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CHRONOLOGY OF SELECTED LITERATURE, REPORTS, POLICY INSTRUMENTS, AND SIGNIFICANT EVENTS AFFECTING FEDERAL SCIENTIFIC AND TECHNICAL INFORMATION (STI)

1945 - 1990

INTRODUCTION

The production, transfer, and use of scientific and technical information (STI) is an essential part of aerospace research and development (R&D). We define STI production, transfer, and use as *aerospace knowledge diffusion.* Studies tell us that timely access to STI can increase productivity and innovation and help aerospace engineers and scientists maintain and improve their professional skills. These same studies remind us that we know little about the process of aerospace knowledge diffusion or about how aerospace engineers and scientists find and use STI. To learn more about this process, we have organized a research project to study knowledge diffusion. Sponsored by the National Aeronautics and Space Administration (NASA), and the Department of Defense (DoD), the *NASA/DoD Aerospace Knowledge Diffusion Research Project* is being conducted by researchers at the NASA Langley Research Center, the Indiana University Center for Survey Research, and Rensselaer Polytechnic Institute. This research is endorsed by several aerospace professional societies including the American Institute of Aeronautics and Astronautics (AIAA), the Royal Aeronautical Society (RAeS), and the Society of Automotive Engineers (SAE). It has been sanctioned by the Technical Information Panel (TIP) of the Advisory Group for Aerospace Research and Development (AGARD) and the AIAA Technical Information Committee.

This four-phase project provides descriptive and analytical information about the flow of STI at the individual, organizational, national, and international levels. It examines both the channels used to communicate STI and the social system of the aerospace knowledge diffusion process. Phase 1 investigates the information-seeking behavior of U.S. aerospace engineers and scientists and places particular emphasis on their use of government funded aerospace STI. Phase 2 examines the industry-government interface and places special emphasis on the role of the information intermediary in the knowledge diffusion process. Phase 3 concerns the academic-government interface and places specific emphasis on the information intermediary-faculty-student interface. Phase 4 explores the information-seeking behavior of non-U.S. aerospace engineers and scientists.

The results of this research will help us understand the flow of STI through muliple channels and will contribute to increasing productivity and to improving and maintaining the professional competence of aerospace engineers and scientists. Information gained can be used to identify and correct deficiencies, to improve access and use and to plan new aerospace STI systems. This study should provide useful information to R&D managers, information managers, and others concerned with improving access to and use of aerospace STI.

THE CHRONOLOGY

The chronology is a comprehensive bibliography covering a variety of selected literature, reports, policy instruments, and significant events affecting Federal STI from 1945 to 1990. It includes some publications and events of historic interest which relate to the evolution of aerospace and aerospace knowledge diffusion. The chronology is descriptive and is designed to provide an overview of the field and for locating primary sources.

Conceptual Framework

In the broadest possible context, the chronology was compiled as a resource for use by anyone interested in aerospace knowledge diffusion, Federal STI, and Federal science and technology policy. Two approaches were used in compiling the chronology. In both approaches, aerospace knowledge diffusion was placed within the context of STI resulting from federally-funded "NASA/DoD" R&D. The first, the more limiting approach, focuses on the production, transfer, and use of federally-funded STI. This approach places federally-funded STI within the context of information policy, information security classification, information technology, intellectual property, national security, and technology transfer. The second, broader approach, focuses on Federal attempts at nurturing technological innovation and stimulating economic competitiveness. This approach places federally-funded STI within the context of Federal science and technology policy and Federal economic, tax, and trade policy.

Organization

The chronology contains 512 entries. Each entry has been given an item number and items are arranged by columns. To provide an overview of Federal STI development, the entries are generally arranged by date of publication and event. Specific information, including the year of the event, report, or policy instrument; the author; bibliographic number; and sponsor are included. Comments regarding the major findings, recommendations, or significance have been added for each entry.

With certain exceptions, the chronology is intended to be comprehensive for aerospace. For the most part, literature, reports, policy instruments, and significant events relative to agriculture, the behavioral sciences, and medicine have not been included. The chronology is not exhaustive, however. The absence of a particular report or event depends upon a number of factors but does not imply lack of quality or usefulness in another context. Although every effort has been made to be comprehensive, the authors welcome additions and corrections. They should be addressed to Thomas E. Pinelli, Mail Stop 180A, NASA Langley Research Center, Hampton, VA 23665-5225. Pinelli can be reached by telephone at (804) 864-2491, by telefax at (804) 864-8311, and by E-mail at tompin@teb.larc.nasa.gov.

Wherever possible, a bibliographic number has been included to help users retrieve the various entries. Given the nature of the material, we advise users to seek the assistance of a professional reference, government documents, or law librarian. In the case of a book, we include the ISBN. (ISBN is an acronym for International Standard Book Number, a number given to every book or edition before publication to identify the publisher, the title, the edition, and the volume number.) We have included a complete citation for journal articles. Federal Register numbers are included for Executive Orders, and Statutes at Large numbers are included for Public Laws. For the most part, government publications carry the Sup/Docs (U.S. Government Printing Office, Superintendent of Documents) classification number. When appropriate, we include the Online Computer Library Center (OCLC) record number. If a study or report has acquired or has become known by a committee chairman's name, such as the Weinberg Report, we include its popular name.

Government technical reports identified by an "AD" number are accessioned in the Defense Technical Information Center (DTIC) data base. Technical reports identified by a "DE" number are accessioned in the Department of Energy (DoE) data base; technical reports identified by an "ED" number are accessioned in the Department of Education, Educational Resources Information Center (ERIC) data base. Technical reports identified by an "N" number are accessioned in the NASA data base; and technical reports identified by a "PB" number are accessioned in the National Technical Information Service (NTIS) data base. Reports issued by the Congressional Office of Technology Assessment (OTA), for the most part, are available from NTIS; otherwise we include the OTA report number. Some technical reports issued by the General Accounting Office (GAO) are available from NTIS, but not all are available from the GAO.

Finally, to increase utility and access, and to establish a conceptual framework, the chronology has seven appendices. Appendix A, prepared by Anna Kramer, is a chronology of the DTIC. Appendix B, prepared by Sarah Kadec, is a chronology of the NTIS. Appendix C, prepared by John Wilson, is a chronology of NASA STI. Appendix D is an index of Executive Orders. Appendix E is an index of Public Laws. Appendix F is an index of popular "common" names for studies. Appendix G is a glossary of acronyms.

Review and Acknowledgements

Numerous drafts of the chronology were reviewed by approximately 25 individuals who, during the course of their professional careers, have been involved to a significant degree in federally-funded STI. The final drafts were reviewed by a much smaller group of subject-matter experts. The authors gratefully acknowledge the assistance of these individuals and groups of individuals. We thank Lee Blue for her editorial support. We extend our thanks to Denise Beasley who, after preparing numerous drafts of the chronology over a 4-year period, managed to retain her sanity and humor. The chronology could not have been compiled without the tireless efforts of Susan Adkins, Gretchen Gottlich, and Cecelia Grzeskowiak of the NASA Langley Research Center's Technical Library. Caroline Berettini and Mary Grace Hume of the College of William and Mary, Sally Bath of the Department of Commerce, Jane Bortnick and Harold Relyea of the Congressional Research Service, John Feulner of the Library of Congress, Peter Hernon of Simmons College, Virginia Lopez of the Aerospace Industries Association, Patrice Lyons, and Joan Dopico Winston of the OTA are singled out for their assistance. We acknowledge their efforts while absolving them of responsibility for any remaining errors or shortcomings. Finally, we express our thanks to Walt Blados (DoD), Gladys Cotter (NASA), and Kurt Molholm DTIC for supporting and funding the *NASA/DoD Aerospace Knowledge Diffusion Research Project.*

Ordering Information

Again, we advise users to seek the assistance of a professional reference, government documents, or law librarian to obtain the material in the chronology. Ordering sources for the various technical reports are given below.

Accession Number	**Source**
Ex. AD-xxxxxx	Defense Technical Information Center (DTIC) Cameron Station Alexandria, VA 22304-6145 (703) 274-6434
Ex. DE-xxxxxx	Office of Scientific and Technical Information Oak Ridge, TN 37830 (615) 576-2268
Ex. ED-xxxxxx	ERIC Processing and Reference Facility 4833 Rugby Avenue, Suite 301 Bethesda, MD 20814 (301) 656-9723
Ex. N-xxxxxxx	NASA Center for Aero Space Information (CASI) P.O. Box 8757 B.W.I. Airport, MD 21240 (301) 859-5300
Ex. PB-xxxxxx	National Technical Information Service (NTIS) 5285 Port Royal Road Springfield, VA 22161 (703) 487-4650

One final note. Bibliographic information regarding most doctoral dissertations is contained in the University Microfilms International (UMI) Dissertation Abstracts data base. Not all universities participate in this program, however. Further, most master theses are not included in the UMI data base. The address for UMI appears below.

UMI
300 North Zeeb Road
Ann Arbor, MI 48106
(313) 761-4700
1 (800) 521-0600

CHRONOLOGY OF SELECTED LITERATURE, REPORTS, POLICY INSTRUMENTS, AND SIGNIFICANT EVENTS AFFECTING FEDERAL SCIENTIFIC AND TECHNICAL INFORMATION (STI)

1945 - 1990

Item Number	Year	Event/Report/ Policy Instrument	Author	Bibliographic Number	Sponsor	Major Findings, Recommendations, Significance
1	1945	End of World War II (WWII)				Increased recognition of the tremendous growth in science and technology and its importance to national goals; raised awareness of need to improve mechanisms for identifying and accessing STI in order to unite complex and fragmentary disciplines
2	1945	Science, The Endless Frontier: Report to the President on a Program for Postwar Scientific Research	Vannevar Bush, Director of Office of Scientific Research and Development (OSRD)	Pr 32.413: Sci 2	President Roosevelt (submitted to President Truman)	Summarized OSRD in World War II; advocated a program for postwar scientific research; provided the justification for federally funded science and technology; recommended the establishment of a National Research Foundation "to develop and promote a national policy for scientific research and scientific evaluation"
3	1945	Executive Orders (E.O.) 9568 and 9604: Providing for the Release of Scientific Information		10 FR 6917 10 FR 10960	President Truman	Created Publications Board (PB) to succeed the OSRD; authorized it to disseminate domestic and foreign WWII technical reports to U.S. industry
4	1945	Department of Commerce (DoC) Order 5		11 FR 177A-330	Secretary of Commerce	Established the Office of Declassification and Technical Services, combining the National Inventor's Board, the PB, and the Committee on the Release of Scientific Information (CORSI)
5	1945	"As We May Think," Atlantic Monthly 176:1, (July 1945): 101-108	Vannevar Bush			Described a scholar's desk machine or Memex for storage and retrieval of information in a manner similar to the way human memory operates, a proposal that served as an ideal toward which systems designers reached (and still reach)
6	1945	Public Law (P.L.) 79-40: First Deficiency Appropriation Act, 1945		59 Stat. 82		Authorized expanded research on guided missiles at National Advisory Committee for Aeronautics (NACA) Langley Laboratory, including establishment of a rocket launch facility at Wallops Island, VA

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Item Number	Year	Event/Report/ Policy Instrument	Author	Bibliographic Number	Sponsor	Major Findings, Recommendations, Significance
7	1946	ENIAC (Electronic Numerical Integrator and Calculator) developed			U.S. Army	First large-scale electronic digital computer, built by John Mauchly and J. Presper Eckert
8	1946	E.O. 9791: Study of Scientific Research and Development Activities and Establishment of President's Scientific Research Board		11 FR 12277	President Truman	Established a Presidential Scientific Research Board, under John R. Steelman, in the Executive Office of the President (EOP) to investigate and report on the entire scientific program of the Federal government with recommendations for providing coordination and improving efficiency of Federal research and development (R&D)
9	1946	P.L. 79-585: Atomic Energy Act		60 Stat. 755		Created civilian Atomic Energy Commission (AEC) to foster the peaceful uses of atomic energy; set up an Industrial Information Branch as part of the AEC to facilitate the transfer of STI to the private sector
10	1946	E.O. 9809: Providing for the Disposition of Certain War Agencies		11 FR 14281	President Truman	Merged PB into a new unit, the Office of Technical Services (OTS), located in the DoC
11	1946	P.L. 79-588: Navy -- Office of Naval Research		60 Stat. 799		Established an Office of Naval Research (ONR) in the Department of the Navy to plan, foster, and encourage scientific research in recognition of its paramount importance in (as related to) the maintenance of future naval power and the preservation of national security; to provide within the department of the Navy a single office to obtain coordinate, and make available to all bureaus and activities of the Department of the Navy world-wide scientific information and the necessary services for conducting specialized and imaginative research to establish a Naval Research Advisory Committee consisting of persons preeminent in the fields of science and research to consult with and advise the Chief of such Office in matters pertaining to research

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12	1946	Bibliography of Scientific and Technical Reports started			OTS	First announcement service for domestic and foreign technical reports; Bibliography issued in the name of the Publication Board, origin of the "PB" prefix still used by the National Technical Information Service (NTIS)
13	1946	Chemical-Biological Coordination Center (CBCC) established			National Academy of Sciences (NAS); National Research Council (NRC)	Among the first attempts to experiment with a punched card system for the organization and search of large complex information files (survived until 1957)
14	1946	P.L. 79-601: Legislative Reorganization Act of 1946		60 Stat. 812		Authorized the Librarian of Congress to establish an enlarged and separate department known as the Legislative Research Service (LRS) to advise and assist in the analysis, appraisal, and evaluation of legislation and other proper activities
15	1946	P.L. 80-162: Executive Branch of Government-Commission		61 Stat. 246		Established the first Hoover Commission (a Commission on Organization of the Executive Branch of Government); one area which it did not examine was the management of Federal R&D
16	1947	P.L. 80-253: National Security Act of 1947		61 Stat. 495		Established the National Security Council to advise the President with respect to the integration of domestic, foreign, and military policies relating to national security; also established the Central Intelligence Agency (CIA)
17	1947	Technical Information and Services Act (proposed) (S. 493, 80th Cong.)		Y4. Ex 7/14: T22		If passed, would have authorized establishment in the Department of Commerce of a clearinghouse for the collection, dissemination, and exchange of scientific, technical, and engineering information; such information to make available to business, industry, and the general public as well as to Federal, State, and local agencies

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Item Number	Year	Event/Report/ Policy Instrument	Author	Bibliographic Number	Sponsor	Major Findings, Recommendations, Significance
18	1947	Science and Public Policy: Administration for Research Vol. 1: A Program for the Nation Vol. 2: The Federal Research Program Vol. 3: Administration for Research Vol. 4: Manpower for Research Vol. 5: The Nation's Medical Research (the Steelman Report)	John R. Steelman	Pr 33.2: Sci 2/v.1-5	President Truman	Recommended that the President designate a member of the White House staff to serve as scientific liaison, that the Bureau of the Budget (BoB) set up a new unit for reviewing R&D programs, and that the Interdepartmental Committee for Scientific Research be created
19	1947	E.O. 9912: Interdepartmental Committee on Scientific Research and Development (ICSRD)		12 FR 8799	President Truman	As recommended by the Steelman Report, created the ICSRD to coordinate Federal R&D activities, including STI transfer
20	1947	National Science Foundation Act (proposed) (S. 526, 80th Cong.)				Vetoed by President Truman principally because of disagreement over the administrative structure of the proposed Foundation
21	1947	OSRD terminated				Created in 1941, OSRD had, under the direction of Vannevar Bush, served as a high-level coordinating body for scientific research and medical problems related to WWII
22	1947	Library of Congress (LC) Sci-Tech Project started			ONR (later with Dept. of Army)	LC funded to collect, process, and distribute scientific and technical reports for the Navy and (later) for the Army
23	1947	AEC Technical Information Service (AEC/TIS) started			AEC	Published the Weekly Title List (later Nuclear Science Abstracts)

CHRONOLOGY OF SELECTED LITERATURE,
REPORTS, POLICY INSTRUMENTS, AND SIGNIFICANT EVENTS
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1945 - 1990

Item Number	Year	Event/Report/ Policy Instrument	Author	Bibliographic Number	Sponsor	Major Findings, Recommendations, Significance
24	1947	P.L. 80-287: Congressional Aviation Policy Board		61 Stat. 676		Established a temporary Congressional Aviation Policy Board to survey and report on the development of a national aviation policy adequate for national defense, interstate and foreign commerce, and postal service needs (The board submitted its findings in Senate Report 949 of March 1, 1948.)
25	1947	Central Air Documents Office (CADO) created from Air Documents Division			U.S. Army Air Corps (later U.S. Air Force), Navy	Established to collect, process, and distribute scientific and technical reports, including captured foreign documents, for the Air Force
26	1948	EDVAC (Electronic Discrete Variable Automatic Computer) developed			Army Ballistics Research Laboratory	First stored-program computer developed by John von Neumann; represented the beginning of modern computer age
27	1948	Research and Development Board Directive Research and Development Board (RDB) 131/1: Special Committee on Technical Information (see Research and Development Board, History and Functions)		M 501.2: R31	National Military Establishment, Research and Development Board	Established the Special Committee on Special Information to implement Board's responsibility for adequate exchange of R&D information among the Departments of the Military Establishment; active until 1951 [precursor to Department of Defense (DoD)]
28	1948	Royal Society Scientific Information Conference, Dorking, England			Royal Society of London	First international conference on scientific information problems, attended by Federal government representatives describing U.S. developments
29	1949	Task Force Reports on the Organization of the Executive Branch of the Government: A Report to Congress (the First Hoover Commission)	Task Force Reports on the Organization of the Executive Branch of the Government	OCLC 13773836	U.S. Congress	Investigated 18 functions of the Executive Branch of government; made specific recommendations to strengthen or otherwise improving their functions

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Item Number	Year	Event/Report/ Policy Instrument	Author	Bibliographic Number	Sponsor	Major Findings, Recommendations, Significance
30	1949	P.L. 81-11: Export Control Act of 1949		62 Stat. 8		Declared that the U.S. will use export controls to the extent necessary to protect the domestic economy, to further foreign policy, and to exercise the necessary vigilance over exports from the standpoint of national security
31	1949	Science Information Exchange created				Although there is no specific legislation authorizing establishing the Exchange, its origin dates back to 1949 when 6 government agencies and departments, engaged in medical research, created an information exchange to serve as a clearinghouse for in-progress scientific research in the medical and allied fields GAO
32	1949	P.L. 81-415: The Unitary Wind Tunnel Plan Act		63 Stat. 936		Authorized $136 million for the construction of new NACA facilities, $10 million for wind tunnels at universities, $6 million for a wind tunnel at the David W. Taylor Model Basin, and $100 million for the establishment of the Air Force Arnold Engineering Development Center at Tallhoma, Tenn., in recognition of the fact that industry could not subsidize expensive wind tunnels for research in transonic and supersonic flight
33	1950	Snow, Ice, and Permafrost Research Establishment (SIPRE) established			ONR	One of the first DoD-operated scientific and technical information evaluation centers; precursor to information analysis centers (IAC)
34	1950	Development of Aircraft Engines and the Development of Aviation Fuels: Two Studies of Relations Between Government and Business	Robert Schlaifer S.D. Hemon	OCLC 2056151 ISBN 2056151	ONR	Presented an historical analysis of the development of aircraft engines and aviation fuels and their relationship to the Federal government
35	1950	AEC/TIS regional libraries established			AEC	Consisted of 31 regional libraries; represents first distributed library system for the dissemination of Federal STI

Item Number	Year	Event/Report/ Policy Instrument	Author	Bibliographic Number	Sponsor	Major Findings, Recommendations, Significance
36	1950	P.L. 81-507: National Science Foundation Act of 1950		64 Stat. 149		Created the National Science Foundation (NSF) for the specific purpose of promoting the progress of science; directed to carry out its mission by developing a national policy for the promotion of basic research and education in the sciences; also included the responsibility for the exchange of STI among scientists in the U.S. and between U.S. scientists and those in other countries
37	1950	P.L. 81-618: National Bureau of Standards -- Funds, Buildings, etc.		64 Stat. 370		Authorized the National Bureau of Standards (NBS) to use funds for certain enumerated activities including the purchase of reprints and the payment of page charges
38	1950	P.L. 81-672: Aeronautical Research -- Advisory Committee for Aeronautics		64 Stat. 418		Directed the NACA to equip and operate research stations, and authorized $16.5 million to expand existing facilities
39	1950	P.L. 81-776: Technological, Scientific, and Engineering Information Act		64 Stat. 823		Directed the DoC to establish a central clearinghouse to make results of scientific, technical, and engineering R&D available, for a fee, to industry, business, the public, all levels of government, and the military, thereby broadening OTS responsibilities
40	1950	P.L. 81-831: Internal Security Act of 1950		64 Stat. 987		Required the registration of Communist organizations; established the Subversive Activities Control Board
41	1951	UNIVAC 1 (Universal Automatic Computer) developed			Census Bureau	First general-purpose commercially-available electronic digital computer, delivered to the Census Bureau for the automation of its regular operations
42	1951	P.L. 81-213: Mutual Defense Assistance Control Act of 1951		65 Stat. 659		Permitted the U.S. to control the export of arms, ammunition, implements of war, and materials having strategic values for war in order to maintain the national security

Item Number	Year	Event/Report/ Policy Instrument	Author	Bibliographic Number	Sponsor	Major Findings, Recommendations, Significance
43	1951	E.O. 10290: National Security Information		16 FR 9795	President Truman	Prescribed regulations establishing minimum standards for the classification, transmission, and handling of information requiring safeguarding in the interest of the United States; extended information security classification to all agencies and departments of the Executive Branch
44	1951	Armed Services Technical Information Agency (ASTIA) created			Secretary of Defense	First attempts to coordinate and consolidate DoD STI activities; absorbed CADO and LC contract operations
45	1951	Office of Scientific Research (OSR) formed under Air Research and Development Command, Army Air Corp [Became Air Force Office of Scientific Research (AFOSR) in 1955] (See Science and the Air Force: A History of the Air Force Office of Scientific Research.)		AD 649855 OAR-66-7 67N-31547		Created OSR as the "single point" for the management of Air Force defense, research, and basic science
46	1951	Electronic Digital Machines for High-Speed Information Searching (Master's Thesis)	Philip R. Bagley		Massachusetts Institute of Technology	Early investigation of possibility of programming MIT Whirlwind computer to search encoded abstracts; demonstrated technical feasibility of online searching and problems associated with existing equipment and cost factors
47	1952	P.L. 82-256: Invention Secrecy Act of 1951		66 Stat. 3		Permitted the Federal Government to withhold the granting of a patent, or publication or disclosure of an invention, if a defense agency maintains that such publication or disclosure is detrimental to national security
48	1952	P.L. 82-403: Aeronautical Research -- National Advisory Committee on Aeronautics		66 Stat. 153		Authorized the NACA to undertake additional construction and to purchase and install additional equipment at Langley and Lewis

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CHRONOLOGY OF SELECTED LITERATURE, REPORTS, POLICY INSTRUMENTS, AND SIGNIFICANT EVENTS AFFECTING FEDERAL SCIENTIFIC AND TECHNICAL INFORMATION (STI)

1945 - 1990

Item Number	Year	Event/Report/ Policy Instrument	Author	Bibliographic Number	Sponsor	Major Findings, Recommendations, Significance
49	1952	Office of Scientific Information (OSI) created in NSF			NSF	Created to develop programs and conduct studies related to facilitating and coordinating STI
50	1952	P.L. 82-414: Immigration and Nationality Act of 1952 (the McCarran-Walter Act)		66 Stat. 163		Revised the laws relating to immigration, naturalization, and nationality; later used as the basis for controlling attendance at U.S. Government-sponsored and co-sponsored scientific and technical meetings
51	1952	P.L. 82-557: Army, Navy, and Air Force Departments -- Research and Development Work		66 Stat. 725		Authorized the secretaries of the 3 military departments to establish advisory committees and appoint part-time personnel necessary for R&D activities, and to make 5-year contracts, with extension rights, to carry out this program; also required the Secretary of each department to report on contracts entered into every six months (The objective of the act was to facilitate the performance of the R&D work in the armed forces.)
52	1953	E.O. 10501: Safeguarding Official Information in the Interest of the Defense of the United States		18 FR 7046	President Eisenhower	Stressed the necessity for balance between protection of information from unauthorized disclosure and the public's right to access government information; defined top secret, secret, and confidential categories of classified information; reduced original classification authority, eliminated "restricted" as a classification level, defined classification markings, and called for continual review for downgrading
53	1953	Biological Sciences Information Exchange (BSIE) established in NRC			NRC	Scope of Sciences Information Exchange expanded to include descriptions of Federal research projects in the biosciences including all life sciences research; transferred in 1954 to Smithsonian Institution
54	1953	Title Announcement Bulletin [later Technical Abstract Bulletin (TAB)] published		D 10.8: nos.	Armed Services Technical Information Agency (ASTIA)	First defense consolidated announcement publication of newly accessioned documents

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Item Number	Year	Event/Report/ Policy Instrument	Author	Bibliographic Number	Sponsor	Major Findings, Recommendations, Significance
55	1953	P.L. 83-108: Commission on Governmental Operations -- Establishment		67 Stat. 142		Established a new Commission on the Organization of the Executive Branch (Second Hoover Commission) to study and recommend functions that were not necessary to Government efficiency or that competed with private enterprise
56	1954	P.L. 83-371: Aeronautical Research Facilities -- Construction		68 Stat. 142		Authorized the NACA to undertake additional construction and to purchase and install certain equipment at its Langley, Ames, and Lewis facilities
57	1954	P.L. 83-665: Mutual Security Act		68 Stat. 832		Gave President power to control the importing and exporting of arms, ammunition, and implements of war, including technical data
58	1954	DoC Order 157		19 FR 8045	DoC	Developed and implemented policy governing dissemination of unclassified scientific, technical, and economic information through OTS
59	1954	E.O. 10521: Administration of Scientific Research by Agencies of the Federal Government		19 FR 1499	President Eisenhower	Clarified and defined Federal agencies' responsibilities for R&D and specified a broader role for the NSF; redefined some functions of the NSF, including facilitating and coordinating scientific research in all sectors and the promotion of effective use of research findings, including STI
60	1954	P.L. 83-703: Atomic Energy Act		68 Stat. 919		Amended the Atomic Energy Act of 1946; directed the AEC to disseminate unclassified STI related to atomic energy and to promote progress and encourage public understanding; and empowered the AEC to classify, for reasons of national security, restricted data and to control its dissemination

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61	1954	Government and Science: Their Dynamic Relation in American Democracy	Don K. Price	OCLC 676635		Contained an early but still very useful discussion of the development of science, science policy, and government; presented an insightful look at development of modern science and its growth under the democratic process
62	1954	First transistorized computer developed			Bell Laboratories	Began second generation of computer systems with tremendous reduction in physical size and increase in computing power
63	1955	P.L. 84-44: National Advisory Committee on Aeronautics		69 Stat. 65		Authorized the NACA to construct certain research facilities at the Langley Aeronautical Library, the Ames Aeronautical Library, the Lewis Aeronautical Library, and the Pilotless Aircraft Station
64	1955	Research and Development in the Government: A Report to Congress (the Second Hoover Commission)	Commission on the Organization of the Executive Branch of the Government	OCLC 522499	U.S. Congress	Investigated R&D in the DoD and civilian agencies; included 5 major recommendations concerning Federal R&D and its management
65	1956	Bureau of the Budget (BoB) assigned supervision over paperwork management				Set the stage for control of Federal information policy by the budgetary arm of the Executive Branch
66	1956	P.L. 84-941: National Library of Medicine Act of 1956		70 Stat. 960		Transferred the Armed Forces Medical Library (established in 1836) from the DoD to the Public Health Service and officially renamed it the National Library of Medicine (NLM); Authorized NLM to acquire, preserve, and make available materials pertinent to medicine; to prepare and make available indexes, catalogs, and bibliographies of the materials; to provide reference and research assistance; and to aid in the dissemination and exchange of STI important to the progress of medicine and public health

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Item Number	Year	Event/Report/ Policy Instrument	Author	Bibliographic Number	Sponsor	Major Findings, Recommendations, Significance
67	1956	Availability of Information from Federal Departments and Agencies, Part 4: Panel Discussion on Scientific and Technical Information (House hearings)		Y4. G 74/7: In 3/part 4	House Committee on Government Operations	Documented a 3-day series of discussions on the availability of information in the field of science and technology; concerns were raised that the Federal Government is unnecessarily impeding the flow of scientific data and information among scientists
68	1956	E.O. 10668: National Research Council of the National Academy of Sciences (amended E.O. 2859)		21 FR 3155	President Eisenhower	Increased the functions performed by the NRC, altered government representation on the NRC, and specifically charged the NRC to gather and collate STI, at home and abroad, and to render such information available to duly accredited persons
69	1957	Current Research and Development in Scientific Documentation series started		OCLC 2070603	NSF	Series of publications (1957-1969) describing current R&D projects in the information sciences; became a major reference tool for investigators and administrators
70	1957	President's Science Advisory Committee (PSAC) established in the White House				Created the PSAC and the position of White House Science Advisor (James R. Killian named to this position); at times a significant Executive Branch voice in Federal STI policy
71	1957	Sputnik 1 placed into Earth orbit			USSR	Began the "space race" between the United States and the Soviet Union; initiated intensive U.S. effort to improve science education and scientific communication; spurred debate on value of centralized information services, like VINITI in Russia; was directly or indirectly responsible for Federal funding of a number of STI programs
72	1957	P.L. 85-253: Aeronautical Research Facilities		71 Stat. 568		Authorized the NACA to construct certain aeronautical facilities and acquire land at the Langley, Ames, and Lewis Aeronautical Laboratories

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73	1958	Publication in Private Publications the Results of Publicly Financed Research Prohibited in Absence of Statutory Authority	General Accounting Office (GAO)	GAO B-135706		Agreed that the availability of STI is synonymous with national scientific advancement; however, ruled that the use of public funds to pay charges for publishing in journals is held to be improper in the absence of authority in the appropriation or enabling legislation
74	1958	Strengthening American Sciences (the Killian Report)	James R. Killian, Panel Chairman	PR 34.8: Sci 2/2	PSAC	Concluded that one way to strengthen American science and technology, as an essential resource for national security and welfare, was to establish a Federal Council for Science and Technology to promote closer cooperation among Federal agencies planning science and technology programs [recommendation accepted by President Eisenhower]
75	1958	International Conference on Scientific Information (ICSI) Washington, DC		OCLC 1240710	American Documentation Institute (ADI), NAS, NSF	First large international meeting on science information held in U.S.; participation by scientists, engineers, librarians, and developers of new information-handling systems, many government agency staff or government-sponsored researchers; published in two volumes
76	1958	Improving the Availability of Scientific and Technical Information in the United States (the Baker Report)	William O. Baker, Panel Chairman	ED 048 893	PSAC	Asserted that the free flow of information is indispensable to the advancement of science, but that the increased volume of STI could no longer be handled within the existing framework; recommended establishment of a science information service to supplement existing programs [NSF Office of Science Information Service (OSIS) was the eventual result]

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77	1958	National Federation of Science Abstracting and Indexing Services (NFSAIS) founded				Founded primarily to represent database producers in both public and private sectors; continues to serve community through education, research, and publications; "science" dropped from name in 1970s, [now National Federation of Abstracting and Indexing Services (NFAIS)]
78	1958	Science and Technology Act of 1958 (Senate Document 90, 85th Cong. 2nd Sess.) Serial no. 12085				If passed, would have created a Department of Science and Technology; standing committees on Science and Technology in the Congress; established national institutes of scientific research; authorized a program of Federal loans and loan insurance for college or university education in the physical or biological sciences, mathematics, or engineering; and authorized the establishment of scientific programs outside of the United States
79	1958	P.L. 85-568: National Aeronautics and Space Act of 1958		72 Stat. 426		Established National Aeronautics and Space Administration (NASA) and a National Aeronautics and Space Council and defined responsibility for space activities; (In a statement issued at the signing of the law, President Eisenhower said: "The present National Advisory Committee for Aeronautics (NACA) with its large and competent staff and well-equipped laboratories will provide the nucleus for NASA. The NACA has an established record of research performance and of cooperation with the armed services. The coordination of space exploration responsibilities with NACA's traditional aeronautical research functions is a natural evolution * * * [one which] should have an even greater impact on our future;" gave NASA specific direction to disseminate widely the results of its research

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80	1958	Progress Report on Science Programs of the Federal Government (Senate Report 2498)		12065 (Serial Set)	Senate Committee on Government Operations; Subcommittee on Reorganization and Internal Organization (Humphrey Subcommittee)	Summarized legislative and administrative actions taken to implement the provisions of the Science and Technology Act of 1958 and related science programs; studied the need to reorganize and coordinate science activities within the Federal Government
81	1958	A Draft Program for a National Technical Information Center			Stanford Research Institute (SRI)	Proposed a Federal agency to develop policy, issue R&D contracts, and coordinate Federal and encourage private sector activities related to STI, advocated reliance on computers for STI storage and retrieval
82	1958	P.L. 85-726: Federal Aviation Act		72 Stat. 731		Created the Federal Aviation Agency (FAA); was transferred to the Department of Transportation (DoT) in 1966 and became the Federal Aviation Administration
83	1958	P.L. 85-864: National Defense Education Act (NDEA) of 1958		72 Stat. 1580		Became the first general Federal aid to education legislation since the Morrill Act of 1862; Title IX created the Science Information Council (SIC) and the OSIS in the NSF; (OSIS became major supporter of STI R&D), evidence of congressional recognition of the science information problem and an attempt to deal with it
84	1959	Federal Advisory Committee on Science Information (FACSI) established			NSF	Composed of 18 representatives of R&D agencies, plus Library of Congress, to advise OSIS on policies and programs to coordinate Federal science information activities; recommended a policy honoring page charges by scientific journals, adopted by government (FACSI was abolished in 1961.)
85	1959	Dissemination of Scientific Information (House Report 1179)		12164 (Serial Set)	House Committee on Science and Astronautics	Noted that for the U.S. to retain leadership in science and technology, STI must be collected and made available rapidly and in effective forms to the science and technology community

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86	1959	BoB Circular A-25: User Charges				Set forth the Federal Government's position on cost necessary for government-produced products and services--states that "where a service (or privilege) provides special benefits to an identifiable recipient above and beyond those which accrue to the public at large, a charge should be imposed to recover the full cost to the Federal Government of rendering that service; no charge should be made for services when the identification of the ultimate beneficiary is obscure and the service can be primarily considered as broadly benefiting the general public;" later revised into the Office of Management and Budget (OMB) Circular A-130
87	1959	E.O. 10807: Federal Council for Science and Technology (FCST) (amended by E.O. 11381)		24 FR 1897	President Eisenhower	Established the FCST to promote closer cooperation among Federal Agencies, to facilitate resolution of common problems and to improve planning and management in science and technology, and to advise and assist the President regarding Federal programs affecting more than one agency (FCST was abolished by Reorganization Plan No. 1 of 1973.); also abolished the Interdepartmental Committee on Scientific Research and Development
88	1960	Bio-Sciences Information Exchange (BSIE) expanded			Smithsonian Institution	Expanded to include physical and social science research; primary purpose to disseminate information about current Federal R&D; Director of the Office of Science and Technology (OST) requested NSF in 1963 to assume the management and funding with the understanding that the operation would continue under the Smithsonian Institution
89	1960	NASA Office of Scientific and Technical Information (NASA OSTI) established			NASA	Centralized and expanded STI services within NASA

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90	1960	Documentation, Indexing, and Retrieval of Scientific Information: A Study of Federal and Non-Federal Science Information Processing and Retrieval Programs (Senate Document 113)		12256 (Serial Set)	Humphrey Subcommittee	Reviewed programs in coordinating science information resulting from Federal R&D and studied Federal and non-Federal science information processing and retrieval systems
91	1960	Research on Mechanical Translation (House hearings)		PN242b.05 OCLC 10918363	House Committee on Science and Astronautics; Special Investigatory Committee	Documented 4 days of Congressional testimony regarding the "state of the art" of mechanical translation in the U.S. and in other parts of the world; presents a good "overview" of the debate concerning the value, problems, and promise concerning machine translation
92	1960	Scientific Progress, the Universities, and the Federal Government (the Seaborg Report)	President's Science Advisory Committee	OCLC 347621	President Eisenhower	Concluded that the process of basic scientific research and the process of graduate educations in universities must be viewed as an integrated task if the nation is to produce the research results and the new scientists that will maintain the leadership of American science
93	1961	Factors Governing the Publication of United States Government Research Reports	Saul and Mary Herner	PB-160 555 OCLC 15027213	NSF	Concluded that the probability of a U.S. Government research report appearing in a non-government abstracting and indexing publication was extremely small; that the overall announcement of DoD research reports was extremely spotty; and that the average time from issuance of a DoD research report to its announcement outside of the government was slow
94	1961	E.O. 10964: National Security Information		26 FR 8932	President Kennedy	Implemented a scheme for the downgrading and declassification of national security information

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95	1961	P.L. 87-26: National Aeronautics and Space Council -- Membership -- Functions		75 Stat. 46		Amended the National Aeronautics and Space Act of 1958; revised the membership and functions of the National Aeronautics and Space Council, and brought the Council into the Executive Office of the President, with the Vice President as Chairman
96	1961	P.L. 87-297: Arms Control and Disarmament Act		75 Stat. 631		Created a U.S. Arms Control and Disarmament Agency; Section 31 of Title 3 set forth the range of research activities that the director was authorized to engage in
97	1961	Coordination of Information on Current Scientific Research and Development Supported by the United States Government: Administrative and Scientific Problems and Opportunities of Central Registration of Research Projects in Science and Engineering (Senate Report 263)	Edward Wenk, LRS, LC	12322 (Serial Set) Y4G. 74/6: Sci 2/7	Humphrey Subcommittee	Studied administrative and scientific problems and opportunities in the central registration of research projects in science and engineering
98	1961	Committee on Scientific Information (COSI) established in FCST			FCST	Created to coordinate Federal science agencies' information activities, to study relationships between existing public and private sector information services, and to develop government-wide standards for science information systems
99	1962	Report to the President on Government Contracting for Research and Development (the Bell Report)		12445 (Serial Set)	BoB	Concluded that the present system for conducting Federal R&D work is a highly complex partnership, that the management control of such activities must be firmly in the hands of full-time government officials, recommended a variety of arrangements of accomplishing federally funded R&D and made numerous suggestions regarding the improvement of the system
100	1962	Telstar 1 placed into orbit			U.S.	First communications satellite placed into earth orbit; facilitated international communication

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101	1962	P.L. 87-579: Depository Library Act		76 Stat. 352		Required all components of Federal Government to submit list of all publications except those already issued through the U.S. Government Printing Office (GPO), those for official use only, and those of no public value, for possible distribution by the Superintendent of Documents (SOD) to Depository Libraries
102	1962	The Production and Distribution of Knowledge in the United States	Fritz Machlup	ISBN 0-691-08608-7		Included an economic analysis of knowledge production, an analysis of the various methods of producing knowledge, and the various occupations associated with the knowledge industry
103	1962	Presidential Reorganization Plan 2		27 FR 5419	President Kennedy	Established the Office of Science and Technology (OST) in the Executive Office of President to provide leadership for Federal scientific and technical activities; transferred certain functions from NSF to OST relating to the coordination of Federal policies for the promotion of basic research and education in the sciences and the evaluation of scientific research programs of Federal agencies (OST was abolished by Reorganization Plan No. 1 of 1973, effective June 30, 1973.)
104	1962	Federal Government's System for Distributing Its Unclassified R&D Reports	T.R. O'Donnell, J.L. Lewis, and J.I. Glendinning	AD 283 335	NSF	Concluded that the Federal systems used to disseminate government technical reports were ineffective and in some cases wasteful; recommended a coordinated government wide policy for technical report documentation and dissemination
105	1962	Special Assistant in President's Science Advisor's Office appointed			Jerome Wiesner, President's Science Advisor	Assistant appointed in the President's Science Advisor's Office to monitor cooperation among Federal STI agencies
106	1962	Secretary's Memorandum No. 1496			Secretary of Agriculture	Designated the U.S. Department of Agriculture (DoA) Library to be the National Agricultural Library (NAL); gave NAL expanded responsibilities for coordination among state agricultural libraries

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107	1962	Scientific and Technological Communication in the Government (the Crawford Report)	James H. Crawford, Chairman, Ad Hoc Task Force	AD 299 545	President's Special Assistant for Science and Technology	Recommended that each Federal agency should have one office solely responsible for science information and that government wide clearinghouses for current and completed Federal R&D efforts should be established
108	1962	National Referral Center for Science and Technology created			LC	Established at LC to provide information on federally supported R&D facilities -- "who was working on what"
109	1962	NASA Scientific and Technical Information Facility (NASA STIF) created			NASA	An early Government-Owned, Contractor-Operated (GOCO) facility to collect and disseminate aerospace related STI [Now Center for Aero-Space Information (CASI)]
110	1962	ANSI standard Z39.2, Bibliographic Information Interchange on Magnetic Tape			American National Standards Institute (ANSI)	Developed a framework for exchange of data among processing systems, thereby improving sharing of STI data among Federal agencies
111	1962	NASA/American Institute of Aeronautics and Astronautics (AIAA) cooperation information activities begin				NASA contracted for acquisition, cataloging, and indexing of all pertinent aerospace (published, unclassified) "open literature"
112	1963	National Standard Reference Data Systems (NSRDS) established at NBS			FCST	Began coordination of efforts to compile and evaluate reliable technical data
113	1963	National Information Center (House hearings on H.R. 1946)		Y4. Ed 8/1: N21i/v.1 Y4. Ed 8/1: N21i/v.1/app. Y4. Ed 8/1: N21i/v.1/pt.4	House Committee on Education and Labor; Ad Hoc Subcommittee on a National Research Data Processing and Information Retrieval Center (Pucinski Subcommittee)	Centered on a bill to amend Title IX of the NDEA of 1958 to provide for a Science Information Data Processing Center to be located in Chicago; highlighted the general interest of the time in centralized information services

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114	1963	Hearings Before the Select Committee on Government Research (House hearings)		Y4. G 74/8: R 31/pt.1 Y4. G 74/8: R 31/pt.2 Y4. G 74/8: R 31/pt.3	House Select Committee on Government Research	A comprehensive examination of the handling of STI by Federal agencies [Summary progress report prepared by the Committee on Scientific and Technical Information (COSATI)]
115	1963	Science, Government, and Information: The Responsibilities of the Technical Community and the Government in the Transfer of Information (the Weinberg Report)	Alvin M. Weinberg, Chairman, Review Panel	Pr 35.8: Sci 2/ Sci 2 OCLC 22356100	PSAC	Asserted that the private and public sectors have important STI roles to play but the Federal Government has overall responsibility for the health of the Nation's scientific communication system; recommended that each Federal agency should disseminate information about research in progress as well as research completed
116	1963	A National Plan for Science Abstracting and Indexing Services	Robert Heller and Associates	PB 169 559	NFAIS	A systems and economic study of secondary STI products and services; proposed organization "X" to act as a buffer between discipline- and mission-oriented abstracting and indexing services; recommended greater cooperation among services
117	1963	Status Report on Scientific and Technical Information in the Federal Government	Jerome B. Wiesner, Presidential Science Advisor	PB 181 541	COSI	Summarized COSI activities and presented brief statement regarding the activities of Federal agency STI programs (annual reports prepared until 1971)
118	1963	DoD Instruction 5100.38: Defense Documentation Center for Scientific and Technical Information		D 1.6/13: 5100.38	DoD	Expanded ASTIA's mission and reconstituted ASTIA as the Defense Documentation Center (DDC) for STI
119	1963	Proposal for the Establishment of a Government Corporation to Create and Provide Services from an Integrated Store of Scientific and Technical Information	Mortimer Taube			Proposed a government corporation to serve as a central collection, storage, and distribution center for STI from NASA, AEC, and DoD

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120	1963	The Library and Information Networks of the Future	American Library Association (ALA)	AD-401 347 RADC-TDR-62-614 OCLC 356428	Air Force Systems Command	Explored the impact that advances in technology are apt to have on information systems, and conceptualized the nature of future electronic libraries and information centers that would operate as part of vast regional information networks
121	1963	Economic Report of the President together with The Annual Report of the Council of Economic Advisors		OCLC 3949266	President Kennedy	Included the economic justification, the concept of **externalities**, for the Federal government becoming involved in the funding of civilian (non-mission) R&D
122	1964	Centralization and Documentation. Final Report to the National Science Foundation. (Second edition) with Appendix	Arthur D. Little, Inc.	PB 166 415 PB 166 906	NSF	Considered the feasibility of developing centralized facilities for the storage and retrieval of S&T documents by furnishing an operational analysis which can be used in formulating government policy on centralization of such facilities; concluded that a large centralized facility for document storage and retrieval could probably not achieve the main objective for which it was designed -- the provision of an effective, exhaustive, document retrieval capability to supplement efforts to prevent duplicative research or development investments
123	1964	Beginner's All-Purpose Symbolic Instruction Code (BASIC) developed	Thomas Kurtz and John Kemeny		Dartmouth College	New tool for easier programming and time-sharing, leading to more applications for computers
124	1964	Characteristics of Technical Reports that Affect Behavior: A Review of the Literature	P.G. Ronco, J.A. Hanson, M.W. Raben, and I.A. Samuels	PB 169 409	NSF	Concluded that virtually no empirical work has been conducted to determine the effectiveness of U.S. government technical reports; agencies producing these reports should develop methods to test their effectiveness and should develop experimental formats to determine their effectiveness as communication devices

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125	1964	A Model Information Retrieval Network for Government, Science, and Industry: A Proposed Basic Configuration for a National System of Interlinking Information Retrieval Networks	Frederick Jonker, et al.	AD-600 221 AFOSR-64 0942	AFOSR	Advocated creation of discipline- and mission-oriented networks that would interact through a National Information Retrieval Network Coordination Center, to serve as a central depository and clearinghouse for all STI; describes the technical, organizational, and financial aspects of a model information retrieval network which could be made operational at the present time
126	1964	Documentation and Dissemination of Research and Development Results: Study Number IV. House Report 1932 (the Elliott Report)	Carl Elliott, Committee Chairman	Y4. G 74/8: S+9/no. 4	House Select Committee on Government Research	Documents a comprehensive review of U.S. R&D information activities, including this study on STI in particular
127	1964	Science Policy Research Division, LRS, LC (now called Congressional Research Service) founded			LC	Major source of overviews on STI policy research and of reports for Congress
128	1964	COSATI formed			FCST	Scope of COSI extended to include technical information services mechanism for coordination of STI programming; included members from Federal departments and agencies and addressed common problems, developed policies and standards, promoted resource- and expertise-sharing; provided effective leadership for 10 years
129	1964	MEDLARS (Medical Literature Analysis and Retrieval System) became operational			NLM	Early comprehensive automated abstract-index system for references to medical literature; employed a computer system for bibliographic organization and a composing unit driven by the computer for creating MEDLARS products
130	1964	Letter of agreement between the President's Special Assistant for Science and Technology and the Director of NSF			Donald Horning, OST Leland Hayworth, NSF	OST was to take responsibility for coordinating STI activities of Federal agencies, while NSF was to deal with non-Federal STI services and organizations and develop STI storage and retrieval systems

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131	1964	Educational Information Services established by Office of Education			Department of Health, Education, and Welfare (DHEW)	Developed Educational Resources Information Center (ERIC) program as clearinghouses for information on selected areas of educational research
132	1964	Presidential Memorandum No. 1776			President Johnson	Science Information Exchange designated as a center for cataloging current and projected scientific research in all areas of water resources (required by P.L. 95-467: Water Resources Research Act of 1964)
133	1964	National Academy of Engineering (NAE) of the NAS-NRC established				Made the NAE a parallel organization within the NAS-NCR structure
134	1964	Government and Science (Committee Print)		Y4. Sci 2: 88-1-8	House Committee on Science and Astronautics; Subcommittee on Science, Research, and Development (Daddario Subcommittee)	Included a general review of science and the relationship of government to science in the U.S.
135	1965	DoD User Needs Study, Phase 1 DoD User Needs Study, Phase 2	Lawrence H. Berul, et al., Auerbach Corporation, Arnold F. Goodman, et al., North American Aviation	AD 616 501 AD 615 502 AD 647 111 AD 647 112 AD 649 284	DoD	First large-scale effort by a major Federal agency to understand the acquisition, flow, and use of STI (including DoD technical reports) in the R&D community
136	1965	NSF, DoD, NLM begin funding the development of advanced information systems and services				Gave support to professional scientific societies, such as American Chemical Society and American Institute of Physics, to bring their literature and the results of Federal R&D under bibliographic control
137	1965	Federal Library Committee (FLC) created		30 FR 8556	LC and BoB	Established to provide for coordination of Federal library services and activities and thereby improve access to Federal information resources

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138	1965	Recommendations for National Document Handling System in Science and Technology	William T. Knox (COSATI) and System Development Corporation (SDC)	PB 168 267 AD 624 560	COSATI	Developed conceptual framework for improved national network of STI, including management and system requirements and need for planning, development, education, and policy-making as prelude to implementation
139	1965	P.L. 89-182: State Technical Services Act of 1965		79 Stat. 679		Attempted to make the results of federally funded R&D more readily available to American business, industry, and commerce; provided incentives to states who established and maintained technical services programs to accomplish their objectives; modelled after the agriculture "county agent" program; terminated in 1969
140	1965	P.L. 89-291: Medical Library Assistance Act of 1965		79 Stat. 1059		Addressed the needs for training more biomedical librarians, the R&D in biomedical communications and medical library science, and for a regional medical library system to aid access and to avoid duplication of resources
141	1965	P.L. 89-306: Federal Property and Administrative Services Act of 1949 amended (Brooks Act)		79 Stat. 1127	House Committee on Government Operations (Jack Brooks, Chairman)	Established automatic data processing (ADP) management, procurement, and policy responsibilities allocated among BoB, General Services Administration (GSA), and NBS; earliest (and still important) Congressional action affecting Federal use of information technology: any computer-based STI system must comply with its dictates
142	1965	Report of the Office of Science and Technology Ad Hoc Panel on Scientific and Technical Communications	J.R.C. Licklider, Panel Chairman	OCLC 18029742 ED 048895	OST	Concluded that the field of STI is not well enough defined to design a national system

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143	1965	The Flow of (Behavioral) Science Information: A Review of the Research Literature	William J. Paisley	PB 169 065	NAS-NRC/NSF	Reviewed the literature (1948 -1965) relating to the information-gathering and -disseminating behavior of scientists; includes 2 detailed summaries: Menzel's "The Flow of Information Among Scientists: Problems, Opportunities, and Research Questions" [PB 144 390] and Garvey and Griffith's "Reports of the American Psychological Association's Project on Scientific Information Exchange in Psychology" [PB 163 606 /PB 169 005/PB 182 962]
144	1965	Intelsat I (Early Bird) launched			Intelsat Consortium	First geosynchronous commercial communications satellite placed in orbit; important for national and international transmission of STI
145	1965	Clearinghouse for Federal Scientific and Technical Information (CFSTI) created in NBS		30 FR 1207		Replaced OTS (in DoC) and with endorsement of COSATI; began to issue consolidated index of Federal scientific and technical reports; precursor to NTIS from R&D agencies (DoD, NASA, etc.)
146	1965	Summary of Activities Toward Interagency Coordination (Senate Report 369)		12664 (Serial Set) (SR 369 89-1)	Humphrey Subcommittee	Reviewed the extent to which Federal interagency coordination maximized the efficiency of Federal science programs, including their STI programs
147	1965	Government and Science: Review of the National Science Foundation (House hearings)		Y4. Sci 2: 89-1/6/v.2	House Committee on Science and Astronautics; Subcommittee on Science, Research and Development (Daddario Subcommittee)	Included a review of NSF programs and activities in science information
148	1965	Recommendations for National Document Handling Systems in Science and Technology	COSATI	AD 624560	FCST	Contained recommendations for a national document-handling system in science and technology; considered problems in the scientific and technical information and document area, and presented a set of principles and requirements for a national system; developed and evaluated the preferred system and alternative approaches

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149	1965	The Scientific Estate	Don K. Price	OCLC 520286		Presented an expanded look, from his early work, on the relationship between "public" science and public policy; looked at the relationship of scientists and science to politics and political ideas
150	1966	The Office of Science and Technology (Committee Print)		Y4. G 74/7: Sci 2	House Committee on Government Operations	Included a review of the structure, roles, and activities of the OST
151	1966	A System Study of Abstracting and Indexing in the United States	System Development Corporation	PB 174 249	COSATI, NSF	Reported the findings of a survey of selected abstracting and indexing organizations in the United States; considered problems, requirements, and technical organizational alternatives pertinent to the development of a document representation subsystem in the context of a national document handling system for science and technology; and presented recommendations for immediate actions by the Federal Government; five appendixes reviewed the assumptions and requirements already developed by COSATI for a national document handling system, previous system studies, user studies, advanced technology, and cooperation among abstracting and indexing organizations
152	1966	P.L 89-487: Freedom of Information Act (FOIA)		80 Stat. 250		A major element of Federal information policy; gave citizens and organizations the right to request access to government records and information, including STI; recognized that information classified on authority of the President is exempt from disclosure under FOIA
153	1966	Committee on Data for Science and Technology (CODATA) established			International Council of Scientific Unions (ICSU)	Represented an important development in U.S. participation in the international sphere of scientific communication; NAS was U.S. sponsor
154	1966	Language and Machines: Computers in Translation and Linguistics (the ALPAC Report)	NRC; Automatic Language in Processing Advisory Committee (ALPAC)	OCLC 1903472 NAS-NRC Publication 1416	NSF	Concluded that NSF should support computational linguistics as distinct from automatic language translation; effectively ended Federal funding for the mechanical translation of foreign language

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155	1966	P.L. 89-670: Department of Transportation Act		80 Stat. 931		Established DoT; brought together several Federal agencies with missions relating to transportation, and authorized the Secretary of DoT to undertake R&D in all modes of transportation
156	1966	COSATI Standard for Descriptive Cataloging of Government Scientific and Technical Reports		AD 641 092	COSATI	Created a standard for cataloging government technical reports; followed by major Federal agencies responsible for technical report processing; latest revision, reflecting technological developments, was published in 1985
157	1966	Toxicological Information Center established at NLM			NLM	Recommended by PSAC; charged with developing computer-based systems for handling toxicology information
158	1967	Applied Science and Technological Progress: A Report to the Committee on Science and Astronautics, U.S. House of Representatives	NAS-NRC	67N 38 508	House Committee on Science and Astronautics; Subcommittee on Science, Research, and Development	Examined the special problems of effective applications of the resources of sciences to advances in technology and sought to identify the principle elements of successful applied research leading to new technology and to indicate the characteristics of an environment conducive to enhancement of those elements
159	1967	The Space Program in the Post-Apollo Period (the Long Report)	Space Science Panel	OCLC 46270 N67-60900	President's Science Advisory Committee	Noting that the Apollo project was to terminate in 3 years, the Panel was asked to study the problem summarized as: Where do we go from here? The Panel stated a rationale for continuing the U.S. space program and printed a program for the next decade
160	1967	Formulation of Research Policies: Collected Papers from an International Symposium (Gordon Research Conference on Formulation of Research Policies, Santa Barbara, CA, 1966)	Lawrence W. Bass and Bruce S. Old, eds.	OCLC 844932 AAAS Publication No. 87	American Association for the Advancement of Science (AAAS)	Documented the proceedings of the first international symposium on science policy; brought together the leaders in the field of science policy

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161	1967	E.O. 11381: Amending E.O. 10807 of March 13, 1959, Relating to the Federal Council for Science and Technology		32 FR 15629	President Johnson	Enlarged the membership of the FCST by the addition of representatives from the Department of State, Housing and Urban Development (HUD) and DoT
162	1967	Recommendations for National Document-Handling Systems in Science and Technology and A System Study of Abstracting and Indexing in the United States	Launor F. Carter, et al., SDC	PB 168 267 PB 174 249 SDC TM-WD-394	COSATI	Contained the results of a study of national systems relating to scientific and technical documents, their handling, and the management of such documents
163	1967	DoD T.E.S.T. completed			DoD/Engineers Joint Council (EJC)	Initial distribution of DoD thesaurus of engineering and scientific terms (TEST), the result of a cooperative effort between the DoD and the EJC
164	1967	AEC and NASA issue Tech Briefs			AEC and NASA	Designed to provide small private firms with results of Federal R&D
165	1967	P.L. 90-396: Standard Reference Data Act		82 Stat. 339		Authorized and directed the Secretary of Commerce to provide or arrange for the collection, compilation, critical evaluation, publication, and dissemination of standard reference data
166	1968	P.L. 90-407: National Science Foundation--Function--Administration		82 Stat. 360		Authorized the NSF to initiate and support scientific research including applied research, at academic and other non-profit institutions; further authorized the NSF to support, through other appropriate organizations, applied scientific research relevant to problems involving the national interest
167	1968	National Science Policies of the U.S.A.: Origins, Development, and Present Status	UNESCO	OCLC 39093	NSF	This historical "county study" of U.S. science policy was conducted as part of an international initiative in science policy; included a historical survey of science policy from colonial to post WWII; described the political and economic settings; included information on the financing of science, the utilization of science, and manpower; and presented national science policy answers

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168	1968	P.L 90-456: Lister Hill National Center for Biomedical Communication		82 Stat. 630		Research and development function, major new responsibility, established at NLM; has been source of innovative work in automated information systems
169	1968	P.L. 90-620: Public Printing and Documents Act		82 Stat. 1238		Enacted Title 44 of the United States Code, "Public Printing and Documents," codifying the general laws relating to public printing and documents
170	1968	The Role of the Technical Report in Scientific and Technological Communication	Task Group on the Role of the Technical Report, Sidney Passman, Chairman	PB 180 944	COSATI, FCST	Appraised the role of the technical report in S&T communication, concluded that both the S&T journal and technical report are essential in the S&T communication process, and insisted that Federal technical report-producing agencies demand full and high quality reporting of government-funded research
171	1968	Evaluation of the MEDLARS Demand Search Service	F.W. Lancaster, University of Illinois	FS 2.202:M 4612		Pioneering study of performance of large-scale computerized bibliographic retrieval system
172	1968	Information Industry Association (IIA) founded				Organized to strengthen private sector role in provision of government information, particularly STI, and to lobby for privatization and the limitation of government services, as "unfair competition" with the private sector
173	1968	Study of Scientific and Technical Data Activities in the United States: Vol. 1: Plan for Study and Implementation of National Data Systems	Science Communication, Inc.	AD-670606 N76-72355	AFOSR	Presented a conceptual plan for a national scientific and technical data system(s); set forth the plan's major objectives to be accomplished within a national program for scientific and technical data
174	1969	Defense RDT&E Online System (DROLS) initiated as an experimental online system			DDC	Experiment designed to provide online access to R&D management information and technical report bibliographic files
175	1969	Successful Industrial Innovations: A Study of Factors Underlying Innovation in Selected Firms	Sumner Myers and Donald G. Marquis	NSF 69-17	NSF	Summarized the results of a study designed to provide empirical knowledge about the factors which stimulate or advance the application in the civilian economy of scientific and technological findings

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176	1969	Scientific and Technical Communication: A Pressing National Problem and Recommendations For Its Solution (the SATCOM Report)	Robert W. Cairns, Committee Chairman	NAS Publication 1707 74V26630 (For synopsis of SATCOM Report see ED 034 682)	NAS/NAE, Committee on Scientific and Technical Communication (SATCOM)	Reported SATCOM's 3-year systematic review of private and government STI programs: offered recommendations on STI planning, coordination, leadership, user services, and informal communications; proposed establishment of an independent joint commission to set STI policy for public and private sectors
177	1969	NASA Remote Console (RECON) system began operation			NASA	One of the world's first large-scale online retrieval systems; Lockheed Missile and Space contracted for software and Informatics Tisco contracted for operation at NASA STIF
178	1969	CAIN (CAtaloging and INdexing) system tapes distribution begun			NAL	Made tapes available to state and other agricultural libraries
179	1969	ARPANET (Advance Research Agency Network) available			Defense Advanced Research Projects Agency (DARPA) in DoD	First operational packet-switching electronic network; originally established to demonstrate possibility of communication among various computers; linked researchers funded by DoD to do networking research nationwide
180	1969	Lockheed Information Retrieval Service established			Lockheed Corporation	Based largely on NASA RECON, marked advent of commercially available online bibliographic databases
181	1969	National Science Research Data Processing and Information Retrieval System (House hearings)		Y4. Ed. 8/1:N21 SC	House Committee on Education and Labor; General Subcommittee on Education (Pucinski Subcommittee)	Offered to amend the NDEA of 1958 to delete a "Science Information Service" and insert a "National Science Research Data Processing and Information Retrieval System;" advanced as a nationwide system to avoid unnecessary and costly duplication in scientific research and to assure quick access to and inventory of science research
182	1969	Project Hindsight	H. Loellbach, ed.	AD-495 905	DoD	One of the early attempts to understand technological change and its relationship to R&D and to scientific progress through quantitative technique

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183	1969	Centralization of Federal Science Activities (House Committee print)	Richard A. Carpenter Dorothy M. Bates Science Policy Research Division (SPRD), LRS	OCLC 23066946	House Committee on Science and Astronautics, Subcommittee on Science, Research, and Development	Put forth a prototype "centralized organization" for the conduct and administration of science at the Federal level; attempted to expose all the pertinent arguments on both sides of the "reorganization" question
184	1969	Technology in Retrospect and Critical Events in Science (TRACES) Vol. 1: Final Report Vol. 2: Working Papers	Illinois Institute of Technology (IIT)	PB-234 767 PB-234 768	NSF	One of the early attempts to understand technological change and its relationship to R&D and to scientific progress through a systematic retrospective of 5 innovations of major importance using key scientific events
185	1970	DDC begins automatic document distribution and automated magnetic tape distribution services			DDC	Automatic Document Distribution (ADD) service provided documents on microfiche, automatically based on user-developed profile. Automated magnetic tape distribution service provided computer-readable bibliographic information
186	1970	P.L. 91-121: DoD Authorization Act of 1969 (Military Procurement, etc.--Reserve Forces)		83 Stat. 204		Included Section 203 known as the "Mansfield Amendment" which stated: "None of the funds authorized to be appropriated by this Act may be used to carry out any research project or study unless such a project or study has a direct or apparent relationship to a specific military function or operation;" modified by P.L. 91-441 as follows: "None of the funds authorized to be appropriated to the Department of Defense by this or any other act may be used to finance any research project or study unless such project or study has, in the opinion of the Secretary of Defense, a potential relationship to a military function or operation;" had a long-lasting influence on DoD funded research by introducing greater caution and uncertainty in awarding grants and contracts

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187	1970	P.L. 91-184: Export Administration Act of 1969		83 Stat. 841		Established as a policy of the U.S. the right to control the export of materials, information, and technology to protect the domestic economy and to ensure national security
188	1970	The Next Decade in Space	Space Science and Technology Panel	72N71905	President's Science Advisory Committee	Included a re-examination of the nation's space program; laid out a set of program goals for the next decade; also included goals for the development of newer technologies
189	1970	Science and Technology: Tools for Progress (the Mettler Report)	The President's Task Force on Science Policy	OCLC 23022596		Conducted a review of Federal science policy and made recommendations as to its future scope and direction; called for national excellence in science and technology, the expanded application of science and technology to social, urban, and environmental problems; recommended better management of Federal science and technology; and the use of Federal science and technology to stimulate technological innovation
190	1970	Presidential Reorganization Plan 2; E.O. 11541		35 FR 10737	President Nixon	The BoB redesignated the OMB in the Executive Office of the President; as by E.O. 11541, all functions transferred to the President of the United States under Reorganization Plan 2 of 1970 were delegated to the director of OMB; OMB assumed a broad range of administrative responsibilities in the areas of Federal information policy and information resources management (IRM)
191	1970	P.L. 91-190: National Environment Policy Act (NEPA) of 1969 (approved 1/1/70)		83 Stat. 852		Established Council of Environmental Quality to study the environment and collect data about it; mandated production of environmental impact statements for federally sponsored projects, to be made available to researchers and the general public

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192	1970	P.L. 91-345: National Commission on Libraries and Information Science Act		84 Stat. 440		Created the National Commission on Libraries and Information Science (NCLIS) to develop and recommend overall plans to provide library and information services adequate to meet the needs of the people of the U.S., to advise the appropriate governments and agencies, and to advise the President and the Congress on the implementation of national policy
193	1970	P.L. 91-412: Department of Commerce - Special Studies and Work		84 Stat. 864		Ordered DoC to do special studies and prepare special compilations, lists, bulletins, or reports at the request of any public or private person, firm, or organization
194	1970	Conference on Interlibrary Communications and Information Networks (Airlie House Conference), Warrenton, VA	Joseph Becker, Chairman and Editor of Conference Proceedings	ED 054 781	U.S. Office of Education	Landmark conference, attended by public and private sector information specialists, that set new directions for development of computer and communications networks in U.S.
195	1970	Presidential Reorganization Plan 3		35 FR 15623	President Nixon	Set up the Environmental Protection Agency (EPA) to deal with water and air quality, solid waste, pesticides and the like, and "radiological health;" major producer of Federal environment related STI
196	1970	Presidential Reorganization Plan 4		35 FR 15627	President Nixon	Created National Oceanic and Atmospheric Administration (NOAA) in DoC; one of the major Federal science agencies, responsible for generating and collecting environmental data and related STI
197	1970	Toward a Science Policy for the United States (House hearings)		Y4. Sci 2:94-2/5	House Committee on Science and Astronautics; Subcommittee on Science, Research and Development (Daddario Subcommittee)	Recommendations included the establishment of a task force to draft a basic national science policy for submission to Congress

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198	1970	The Management of Information and Knowledge (Eleventh Meeting) Committee Serial No. 15		Y4. Sci 2: 91-2/15	House Committee on Science and Astronautics, Panel on Science and Technology	Fostered improved understanding on the part of scientists of legislative responsibilities and processes as they relate to scientific research; identified spheres of scientific and technological research that offered exceptional promise for our national welfare and security, and that need further attention, strengthening, or shift in emphasis; discussed current methods for conducting research; provided information on matters of international cooperation and organizations concerned with science and technology
199	1970	Compilation of Major Recommendations from Five Studies Relating to National Scientific and Technical Information Systems	Dewitt O. Myatt, Susan I. Jover, Science Communications, Inc.	PB 193 345	NSF	Included 125 recommendations from four studies commissioned by COSATI and one performed by SATCOM of NAS-NAE; Part I presented the recommendations as concise statements, listed according to the subject categories of central management concepts for national programs, roles, and responsibilities of organizations generating information for the scientific and technical community, and suggested techniques for approaching areas such as user/operator education, standardization, informal communications, and literature handling; Part II presented the recommendations individually, giving the concise statement form and the full text of each recommendation, page numbers of important related discussion in the report, other related recommendations in the report, and additional annotation on background and import of the recommendation which might not be immediately apparent
200	1970	DoC Order 30-7A		35 FR 14475	DoC	CFSTI renamed NTIS and empowered to act as major Federal clearinghouse for STI and business and statistical information; designed to be largely self-supporting

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201	1970	Federal Support of Applied Research	Ad Hoc Task Force on Roles of the Government in Applied Research, COSEPUP, NAE	OCLC 2175153	NSF	Established a framework of concepts, guidelines, and criteria to be used by NSF in determining what role the Federal government should play in the support of applied research
202	1971	COSATI transferred from OST to NSF				Began its decline in influence, culminating in its abolishment in 1972; still cited as one of the few successful efforts at coordinating Federal STI policy and programs
203	1971	U.S. Supreme Court, N.Y. Times Co. v. U.S. (the Pentagon Papers Case)		403 U.S. 713		Concerned the publication of "classified" information contained in the "History of U.S. Decision-Making Process on Viet Nam Policy;" ruled the Federal government did not meet its burden of showing justification for the imposition of a prior restraint of expression (freedom of the press - prior restraint)
204	1971	UNISIST, Study Report on the Feasibility of a World Science Information System	ICSU-UNESCO Central Committee	ED 054 808	United Nations Educational Scientific and Cultural Organization (UNESCO)	Argued that an international system of scientific communication and information exchange was feasible if formed as a flexible network of existing and future services
205	1971	Beginning of microcomputer development			Intel Corporation	Intel's first microprocessor signalled the take-off of the personal computer revolution
206	1971	P.L. 91-510: Legislative Reorganization Act of 1970		84 Stat. 1140		The LRS became the Congressional Research Service (CRS) and continued as a separate department in the LC but with added emphasis on its research responsibilities; assigned review and analytical responsibilities to the GAO
207	1971	MEDLINE (MEDLARS online) begins operation			NLM	MEDLINE became available for online remote access by medical schools, hospitals, and medical libraries; became model for SDC-ORBIT, the second major national database service

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208	1971	NASA, NTIS, and DDC agree to implement 24:1 microfiche reduction ratio			NASA, NTIS, and DDC	Three major Federal STI organizations adopt National Microfilm Association Standard; based on COSATI-developed standards
209	1971	Proceedings of Conference on Federal Information Resources		ED 053 770	COSATI and FLC	Second conference for information and research library communities
210	1971	A Historical Study of the Benefits Derived From Application of Technical Advances to Civil Aviation Vol. 1: Summary Report and Appendix A Vol. 2: Appendix B through I	Booz-Allen Applied Research	N71-27010 N71-27011	DoT/NASA	Reported on an analysis of federally funded aeronautical R&D since 1945 and the benefits that accrued from the transfer of this technology to U.S. commercial aviation
211	1972	DROLS became operational			DDC	System provides secure online access to R&D management information and technical report bibliographic files
212	1972	Effectiveness of Smithsonian Science Information Exchange Hampered by Lack of Complete, Current Research Information	GAO	GAO B-175102		Concluded that many Federal agencies were not using the Science Information Exchange to the fullest extent because its data bank was not current or complete; at the same time the ability of the exchange to provide current information was being hampered because Federal agencies were not providing the Exchange with information
213	1972	Information Technology: Some Critical Implications for Decision Makers New York: The Conference Board 1972		ED 060 907	The Conference Board	Included (perhaps the first) strategic look at information technology and its significant implications for business, education, government, and the individual; follow-on report contained 10 information technology areas requiring policy level attention
214	1972	E.O. 11652: Classification and Declassification of National Security Information and Material		37 FR 5209	President Nixon	Placed further limitations on the authority to classify, created mandatory review, shortened the period for downgrading, and established a 30-year declassification date (excluding certain materials)

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215	1972	Libraries and Information Technology: A National System Challenge	Anthony Oettinger, Chairman, Information Systems Panel, NAS	PB 212 942	Council on Library Resources (CLR)	Pointed out that development of national computer-based systems suffered from human-related problems and inadequate data on services and costs
216	1972	Making Technical Information More Useful: The Management of a Vital National Resource	Martin Greenberger, Task Group Chairman	OCLC 21700208	Director of NSF to Chairman, FCST	Investigated technical information programs and policy issues in both the public and private sectors, with particular emphasis on the impact of new technologies; recognized that a focal point for STI policy formulation within the NSF was needed as well as greater operational coordination among STI policy-making bodies
217	1972	Bibliography on Knowledge Utilization and Dissemination	Ronald G. Havelock	ISBN 0-87944-061-9	U.S. Office of Education	Reviewed literature relevant to the topic "Utilization and Dissemination in all Fields off Knowledge"
218	1972	Public Technology: A Tool for Solving National Problems	Committee on Intergovernmental Science Relations	81N77460 PB 209 621	Federal Council for Science and Technology	Evaluated the impact of Federal policies and programs on the scientific and technological activities of state and local governments; inventoried state science and technology activities; formulated recommendations for Federal institutions to strengthen this activity; and recommended policies, procedures, and programs to improve management information exchange and planning and coordination
219	1972	Hard Tomatoes, Hard Times: The Failure of the Land Grant College Complex (See Hard Tomatoes, Hard Times: the Hightower Report.)	Jim Hightower	ISBN 0-87073-656-6	Agribusiness Accountability Project	Concluded that America's land grant college-agricultural complex (colleges of agriculture, agricultural experiment stations, and state extension services) have come to serve "an elite of private, corporate interests in rural America" while ignoring those who have the most urgent needs and most legitimate claims for assistance
220	1972	P.L. 92-484: Technology Assessment Act		86 Stat. 797		Created Congressional Office of Technology Assessment (OTA) and directed it to study impacts of technology initiatives and make recommendations to Congress; has produced numerous reports on technology and policy related to STI

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221	1972	Research and Development Contribution to Aviation (RADCAP) Vol. 1: Contributions of Military Technology Research, and Development to Civil Aviation Programs Vol. 2: Military Technology, Research, and Development to Civil Aviation Programs	John G. Paulisick (Vol. 1) Charles R. Hudson (Vol. 2)	73N13982 73N13983	DoD/NASA	Reported on advances made in U.S. commercial aviation since 1925, the significant technological advances that had taken place in U.S. commercial aviation, and the relationship between these advances and federally funded aeronautical R&D
222	1972	Optical disk developed			Phillips and MCA	First commercial development of optical disk (laser) technology, with resulting impacts on information systems design
223	1973	Presidential Reorganization Plan 1		38 FR 9579	President Nixon	Abolished or transferred out of the Executive Office of the President (EOP) the Office for Emergency Planning, the Office of Science and Technology, and the National Aeronautics and Space Council; certain functions of the Office of Science and Technology were transferred to the Director of the NSF
224	1973	Interactions of Science and Technology in the Innovative Process: Some Case Studies	Battelle Columbus Laboratories	PB 228 508	NSF	Used the case study method to analyze the significant events in the innovation process of technological developments having high social impact; special attention was given to 3 types of technical events (a) those involving basic science, (b) those involving applied research, and (c) those having to do with technical development and application
225	1973	Priorities for Research Applicable to National Needs (the Wenk Report)	Committee for the Study of Research Applied to National Needs of the Committee on Public Engineering Policy; NAE	75N15590		Reported the results of a broad study and review of national problem-oriented research priorities; funded as part of NSF's program of Research Applied to National Needs (RANN)

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226	1974	P.L. 93-348: National Research Service Award Act of 1974		88 Stat. 342		Established the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research; the Commission was to protect the privacy of research subjects, to consider the nature and definition of informed consent, to maintain the confidentiality of data and to perform other tasks
227	1974	Federal Laboratory Consortium established				Chief goal to facilitate and encourage human and information resource sharing to promote technology transfer
228	1974	Committee on International Scientific and Technical Information Programs established in NAS				Acted as the academy's representative to international organizations; also provided information on international scientific organizations and programs; disbanded in December 1978
229	1974	P.L. 93-438: Energy Reorganization Act of 1974		88 Stat. 1233		Split the functions of AEC between the Energy Research and Development Administration (ERDA) and the NRC
230	1974	P.L. 93-502: Freedom of Information Act Revisions		88 Stat. 1561		Revised 1966 FOIA by requiring each Federal agency to make this information available to the public current indexes that provided any identifying information; any agency must make this information available to any person who made the appropriate application
231	1974	ANSI standard Z39.18-1974 Scientific and Technical Reports --Organization, Preparation, and Production			ANSI	Originated in 1968 as COSATI guidelines; provided guidelines for the organization, preparation, and production of scientific and technical reports, including those issued by the Federal Government; designed to foster conformity and ease of retrieval while permitting diversity of purpose, scope, and subject matter

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232	1974	P.L. 93-556: Federal Paperwork Act		88 Stat. 1789		Established the Commission on Federal Paperwork to study procedures of the Federal Government related to information gathering, dissemination, management, and control
233	1974	P.L. 93-579: Privacy Act (Amended: 1976)		88 Stat. 1896		Prohibited Federal agencies from disclosure of records without written consent of the individual affected; agencies were required to keep account of disclosures and inform subjects of disclosures; allowed civil suits against agencies not in compliance
234	1974	The Users and Uses of Scientific and Technical Information: Critical Research Needs	James E. Freeman and Albert H. Rubenstein, Denver Research Institute	ED 115 304 PB 237 941	NSF	Concluded that priority needed to be given to familiarizing potential users with information services, and to determine relevance of STI to major social problem areas (e.g., energy, environment, and transportation)
235	1975	"Support for Reviews and Data Evaluation," Science 187:4177 (21 February 1975):1	Lewis M. Branscomb			Noted that Federal Science Policy seems to make support for review scholarship the stepchild of research support; "While support for original research attracts big money, support for review and education languishes"
236	1975	The Role and Application of Scientific and Technical Information (STI) in the Process of Innovation: Invention and Conception	Aaron J. Gellman Stephen Feinman	PB 256 580	NSF	Explored the information gathering habits and practices of engineers and scientists who are innovators and determined that informal, rather than channels are used extensively by innovators
237	1975	A Review of Federal Agency Responses to Selected Recommendations Made in Three Scientific and Technical Information Reports	FCST Ad Hoc Task Group on Federal Agency STI Review, L.G. Burchinal, Chairman		President's Science Advisor, H. Guyford Stever	Surveyed 15 Federal agencies about their responses to recommendations made in the Weinberg, SATCOM, and Greenberger reports; demonstrated that few were familiar with the recommendations and that most agencies had not implemented the suggested STI management procedures

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238	1975	Federal Scientific and Technical Communication Activities: 1974 Progress Report		NS2.12: 974	OSIS, NSF	First in a (short) series of annual reports of activities; descriptions were prepared by the agencies and published in microfiche by NSF
239	1975	Toward a National Program For Library and Information Services: Goals for Action	Frederick Burkhardt, Chairman	Y3. L 61:2/P94/2	NCLIS	Concluded that the development of a nationwide library and information network should be a Federal responsibility
240	1975	Economics and Interaction of the Publisher-Library Relationships in the Production and Use of Scholarly and Research Journals	Bernard M. Fry and Herbert S. White	PB 249 108 ISBN 0-669-00886-9	OSIS, NSF	First comprehensive and statistically significant study of scholarly and research journals; focused on the economic viability of the journal system for communicating scholarly and research information
241	1975	Federal Management of Scientific and Technical Information (STINFO) Activities: The Role of the National Science Foundation	Robert L. Chartrand and Rosemary A. Chalk, CRS	N75-28954 76-S542-4	Senate Committee on Labor and Public Welfare, Special Committee on the NSF (Kennedy Committee)	Noted the importance of optimizing cooperation and minimizing duplication in STI areas; reported apparent need for a new advisory organization capable of performing analytical tasks as well as monitoring and coordinating STI activities
242	1975	P.L. 94-131: Patent Cooperation Treaty		89 Stat. 685		Allowed a patent application to be filed in any one of several receiving offices; allowed patentee to establish a priority patent
243	1976	Review of Intergovernmental Dissemination of Federal Research and Development Results: Special Oversight Report No. 5 (Serial no. 94-JJ)		Y4. Sci 2: 94-2/JJ	House Committee on Science and Technology; Subcommittee on Domestic and International Scientific Planning and Analysis	Analyzed how advances in computer and telecommunications technology affect the conduct of science, described the impact of information technology on dissemination and use of research results, and focused on the role of the Federal Government in this area
244	1976	National Information Policy: Report to the President of the United States	Andrew A. Hines and Joseph Becker (Published by NCLIS)	Y3. L 61:2 In 3/2 PB 262 436	Domestic Council Committee on the Right of Privacy, Vice President Nelson A. Rockefeller, Chairman	Identified information as important national issue; noted that existing practices and perceived roles in the information field must be reexamined in light of new technological developments. Recommended creation of an Office of Information Policy

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245	1976	The SCATT Report: A Tentative Idealized Design of a National Scientific Communication and Technology Transfer System	Russell L. Ackoff, et. al., University of Pennsylvania	PB 247 242	NSF	Developed an "ideal" system for the U.S.; the technology was based on successive revisions of a conceptual framework for organizing the flow of information from points of origin to all possible points of application; and one of the advantages of this approach was that all affected parties -- information generators and users as well as information processors -- could help shape the evolving model
246	1976	Division of Science Information (DSI) created in NSF			NSF	OSIS replaced by DSI, which focused on promoting information science research rather than providing STI services
247	1976	A National Approach to Scientific and Technical Information in the United States	Joseph Becker	PB 261 270 ED 129 240	NSF	Articulated the Federal Government's responsibility in providing for the dissemination of STI and presents an historical overview; identified and explained the pressures affecting the nation's ability to fully use STI; reviewed, and incorporated past studies and reports, and discussed new directions for Federal science policy; and suggested that the Federal Government establish a locus of responsibility for making science policy at the national level
248	1976	Scientific and Technical Information: Options for National Action	Bruce G. Whalen and Charles C. Joyce, Jr., MITRE Corporation	PB 261 863 ED 135 385 NS 1.2: In 3/3	NSF	Identified major STI issues and action alternatives for the newly established OSTP and analyzed STI aspects of P.L. 94-282; compared and analyzed recommendations from results of earlier STI policy studies
249	1976	Nuclear Science Abstracts superseded by Energy Research Abstracts and INIS Atomindex (1970-)			Energy Research and Development Administration (ERDA)	Represented a shift to broader fields of interest, reflecting high national priority of all energy sources

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250	1976	P.L. 94-282: National Science and Technology Policy, Organization, and Priorities Act of 1976 (See Title II - Office of Science and Technology Policy, Title III - President's Committee on Science and Technology, and Title IV - Federal Coordinating Council for Science and Technology.)		90 Stat. 463		Set forth a national policy for science and technology; established an Office of Science and Technology Policy (OSTP) within the Executive Office of the President; directed the establishment of a temporary President's Committee on Science and Technology to survey the overall Federal science, engineering, and technology effort; replaced the Federal Council for Science and Technology set up in 1959 with a Federal Coordinating Council for Science, Engineering, and Technology to be under the chairmanship of the Director of OSTP; and provided for the establishment of an Intergovernmental Science, Engineering, and Technology Advisory Panel to advise the OSTP Director on the optimum use of Federal research efforts to improve the scientific and technological capabilities of the state governments
251	1976	P.L. 94-553: Copyright Revision Law		90 Stat. 2541		Protected published and unpublished works from the moment of creation; required re-examination of impact of photocopying on copyrighted works [CONTU (Commission on New Technological Uses)] to examine implications of computer use on copyright laws
252	1976	Federal Court of Appeals, Michigan, United States v. Van Hee		531 F. 2d 352		Designated blueprints and expert knowledge subject to licensing under State Department regulations from the Mutual Security Act of 1954; some STI brought under same regulations as physical goods
253	1976	A Forecast of Technology for the Scientific and Technical Information Communities (4 volume set)	Audrey Clayton and Norman Nisenoff, Forecasting International, Inc.	PB 253 937	NSF	Described and forecasted relevant technologies, events that could affect technological developments, and appropriate governmental action to stimulate areas in need of support and guidance

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254	1976	P.L 94-278: Health Research and Health Services Amendments of 1976. Title III: Disclosure of Research Information Act of 1976		90 Stat. 401 Title III: 90 Stat. 406		Empowered President's Biomedical Research Panel to study whether research proposals and reports should be public information, considering researchers' proprietary interests, the efficacy of peer review, protection of the public against unreasonable risk, and the adequacy of informed consent procedures
255	1976	Statistical Indicators of Scientific and Technical Communication (1960-1980) Vol. 1: A Summary Report Vol. 2: A Research Report Vol. 3: A Data Appendix to Vol. 2	Donald W. King, et al.	PB 260 374 PB 254 060 PB 255 503	NSF	Described the major indicators and their significance to the communication of STI; addressed the data analyses that led to the system of statistical indicators, and included a discussion of the overall framework upon which the analysis is based as well as the mathematical models used to generate the indicators
256	1977	P.L. 95-91: DoE Organization Act		91 Stat. 565		Established DoE by the reorganization of energy functions within the Federal Government in order to secure effective management, to assure a coordinated national energy policy, and for other purposes
257	1977	P.L. 95-92: International Security Assistance Act of 1977		91 Stat. 614		Used the U.S. Munitions List to define categories of goods, services, and articles subject to licensing; included technical data designated by the International Traffic in Arms Regulations (ITAR) under three basic categories: unclassified information that had any application to arms, ammunition, and implements of war; any technology that advanced the state of art or establishes a new art in an area considered to have military applications of significance; and classified information that could be used to further other U.S. foreign policy goals

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258	1977	A Report of the Commission on Federal Paperwork: Information Resources Management		Y3. P 19:2 In 3	Commission on Federal Paperwork	Introduced the concept of IRM into Federal Government to improve the effective management of information and information technology and to reduce the costs of a wide range of information services and products; paved the way for OMB's role as a major actor in information policy
259	1977	The Information Economy Vol. 1: Definition and Measurement Vol.2: Sources and Methods for Measuring the Primary Information Sector	Marc Porat	C 1:60/2:77-12 (1)-(9) PB 286 762 PB 286 763 OT-SP-77-12(1) OT-SP-77-12(2)	Office of Telecommunications, DoC/NSF	Attempted to define and measure an "information activity" in the U.S. economy and to examine the structure of the information activity with respect to the rest of the economy; the study was reported in 9 volumes, each of which had its own subtitle; the most critical part of the entire report series is found in the first 2 volumes; the remaining volumes were essentially supplements to and extensions of Volumes 1 and 2
260	1977	Presidential Reorganization Plan 1		42 FR 34958	President Carter	Created National Telecommunications and Information Agency (NTIA) in DoC; absorbed Office of Telecommunications Policy in the Executive Office of the President; the Federal Coordinating Council for Science, Engineering, and Technology (FCCSET) abolished and its functions transferred to the President by Reorganization Plan No. 1 of 1977
261	1977	Reorganization of Federal Science and Technology Activities (Senate hearings)	SPRD, CRS	Y4. G 74/9: Sci 2	Senate Committee on Governmental Affairs	Included a compendium of significant reorganizations and proposed organizations for the conduct of scientific and technological activities within the Executive branch and the Executive Office of the President in the period 1962 - March 31, 1977
262	1977	E.O. 12009: Providing for the Effectuation of the Department of Energy Organization Act		42 FR 46267	President Carter	Established a cabinet-level department for Federal energy functions

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263	1977	A Report to the Director of the National Science Foundation	Joe B. Wyatt, Chairman Science Information Activities Task Force	NSI.2 Sci 1/1x	NSF	Made recommendations to the director of NSF concerning NSF roles and responsibilities in the field of information science for the 1980's; articulated the need for (1) a new research program for information science, (2) a mechanism to assemble facts and analyses about STI for policymaking, (3) a program to train scientific and nonscientific personnel in the use of STI systems, and (4) the dissolution of the current Division of Science Information; and recommended that NSF (1)support research application programs for the dissemination and use of STI, (2) participate in certain STI activities at the national and international levels, (3) assume responsibility for STI policy research and analysis at the national level, and (4) support RDT&E methods for educating and training perspective users of STI systems
264	1977	Managing the Flow of Technology: Technology Transfer and the Dissemination of Technological Information Within the R&D Organization	Thomas J. Allen	ISBN 0-262-51027-8	NSF/NASA	Concluded that fundamental differences exist between science and technology and scientists and engineers; that communication patterns are essential to R&D; and that the communication of STI is critical to R&D performance
265	1977	Science, Technology, and American Diplomacy: An Extended Study of the Interactions of Science and Technology with U.S. Foreign Policy (Committee Print - 3 part set)	Frank Huddle, CRS	OCLC 3566533 YN. IN 8/16: Sci 2/3/v.1-3	House Committee on International Relations, Subcommittee on International Security and Scientific Affairs	Concluded that U.S. diplomacy neglected 2 powerful instruments of policy formation and policy execution: technological achievement and in the skills of organization and administration to apply technology effectively

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266	1977	Development and Assessment of Scenarios for the Scientific and Technical Information Search System of the Future	Battelle Columbus Laboratories	PB 268 712 PB 286 711 (Exec. Summary)	NSF	Developed and assessed 4 scenarios for the STI search system of the future; each assuming different combinations of the levels of three environmental parameters--technology utilization, information priority, and competition; the resulting scenarios portrayed futures ranging from highly advanced technology-oriented systems to systems showing little technological progress with even deterioration of current levels of services; from the assessments it was indicated that information priority was the dominating environmental parameter; the conclusions and recommendations focused on: (1) anticipated continued growth of the system; (2) the need to establish a higher level of information priority; (3) education in the universities, orientation of managers and decision-makers, training of users; (4) standardization or pseudo-standardization; (5) increased cooperation and joint participation by library and information science communities; and (6) development of vastly improved document, location, ordering, and delivery systems
267	1978	Technological Innovation: A Critical Review of Current Knowledge	Patrick Kelly and Melvin Kranzberg	OCLC 0911 302344	NSF	Collected, revised, and critiqued the literature from a variety of disciplines relating to technological innovation; identified the "gaps" and "weaknesses" regarding what is known about technological innovation; determined the various methodologies and approaches that were used; looked at technological innovation within an individual and organizational content; and looked at technological innovation within a larger "system" context
268	1978	Technological Changes and Productivity Growth in the Air Transport Industry	Nathan Rosenberg, Alexander Thompson, and Steven Belsley	79 N 10997 NASA TM 78505	NASA	Examined the progress of U.S. commercial aviation in terms of invention, development, production, and improvement phases; stated that technological advances resulting from aeronautical R&D had resulted in dramatic productivity increases for the U.S. commercial aviation industry

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269	1978	Final Report of the National Commission on New Technological Uses of Copyrighted Works	National Commission on New Technological Uses of Copyrighted Works	OCLC 4746096	LC	CONTU's final report -- among other things, recommended that software be protected as a literary work under copyright and provided a definition of "computer program"
270	1978	Critical Issues in Scientific and Technical Communication: Perceptions of Users, Providers, and Policymakers (Report of the National Forum on Scientific and Technical Communication)	Elizabeth B. Adams and Sally A. Rood	PB 279 382	NSF	Identified several areas amenable to public policymaking, such as access to STI, economic factors interfering with STI, requirements for new functional activities in STI, and requirements for centralized planning for scientific and technical communication; recommended establishment of a focal point within the Federal Government for information policy
271	1978	Two Centuries of Federal Information	Burton W. Adkinson	ISBN 0-87933-269-7		Detailed the Federal Government's STI policies and programs during the period 1942-1972; discussed the events that helped shape the various agencies STI programs
272	1978	E.O. 12039: Relating to the Transfer of Certain Science and Technology Policy Functions		43 FR 8095	President Carter	Transferred responsibility for the preparation of the annual science and technology report and the 5-year forecast of current and emerging problems from the Director of OSTP to the Director of NSF; the Intergovernmental Science, Engineering, and Technology Advisory Panel (ISETAP) and FCCSET, which were created under P.L. 94-282 (May 11, 1976) were dissolved and then reestablished as Executive Office advisory bodies abolishing their statutory basis; the President's Committee on Science and Technology (PCST) was abolished and its functions were transferred to the President; [The Executive Order did not mention the Section of P.L. 94-282 which directed the President to transmit the interim and final reports (surveying the overall Federal science, engineering, and technology effort) to the Congress within 60 days of receipt to be accompanied by appropriate comments,observations, and recommendations]

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273	1978	United States v. Edler Indus., Inc.		79 F. 2d. 516 (9th Cir. 1978)		Ruled on the power of the State Department to restrict export of any technical data under the Arms Export Control Act (AECA); introduced a two-part test as a prerequisite for restricting the export of unclassified technical data under the AECA
274	1978	E.O. 12065: National Security Information		43 FR 28949	President Carter	Established specific categories of information for classification consideration, limited all information classification to 6 years unless originator decides otherwise, limited classification of basic scientific research, reduced time for systematic review form 30 to 20 years, and initiated concept of "when in doubt, don't classify"
275	1978	Technology Transfer and Other Public Policy Implications of Multi-National Arrangements for the Production of Commercial Airframes	Aaron J. Gellman and Jeffrey P. Price	N78-29045	NASA	Examined the question of technology transfer vis-à-vis U.S. commercial aviation through international arrangements for the production of commercial transport aircraft
276	1978	Passing the Threshold Into the Information Age -- Perspective for Federal Action on Information Vol. 1: Basic Findings Vol. 2: Research Report	Vincent Giuliano, et al., Arthur D. Little	PB 281 720 PB 281 721	NSF	Identified three "eras" in the history of the STI environment: discipline-oriented, mission-oriented, and problem-oriented; emphasized development of rationale for stimulating policy changes; included recommendations for coordinating STI policy and operations
277	1978	Optimizing the Value of U.S. Scientific and Technical Information: Legislative Options (Committee Print)			House Committee on Science and Technology; Subcommittee on Science, Research and Technology	Suggested that STI deserved and required its own policies, infrastructure, and assignment of roles to stakeholders in the public and private sectors; highlighted past STI concerns and efforts; and identified opportunities for legislative action to maximize the utility and effect of STI in both national and international arenas

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278	1978	P.L. 95-426: Foreign Relations Authorization Act, Fiscal year 1979		92 Stat. 963		Title V of the Act addressed science, technology, and American diplomacy and set forth a policy for the United States to maximize the benefits and minimize the adverse consequences of science and technology in the conduct of foreign policy; the Secretary of State was given primary responsibility for taking the steps necessary to implement the policy; the legislation also required an annual report from the President to the Congress containing recommendations on: personnel requirements and standards for personnel involved in foreign relations and science and technology, the continuation of existing bilateral and multilateral activities and agreements involving science and technology, (including an analysis of the foreign policy implications and scientific benefits of such activities), the adequacy of funding and administration of such activities, and plans for future evaluation of such activities on a routine basis
279	1978	P.L. 95-504: Airline Deregulation Act of 1978		92 Stat. 1705		Amended the Federal Aviation Act of 1958 to "encourage, develop, and attain an air transportation system relies on competitive market forces to determine the quality, variety, and price of air services, and for other purposes"
280	1978	National Needs for Critically Evaluated Physical and Chemical Data	National Research Council, Committee on Data Needs	AD-A098055 81N75115	NAS	Concluded that reliable values of numerical data that express in quantitative terms the properties and behavior of materials were essential in all branches of science and technology and were needed to arrive at valid decisions whenever a governmental or industrial decision involved elements of science and technology; that the scientific literature contained a wide range of diverse fields, but, unfortunately, it also contained many erroneous values; and that a substantial intellectual effort was required to select reliable values from the large and growing total of those reported

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281	1978	Government Publications: Their Role in the National Program for Library and Information Services	Bernard M. Fry	Y3. L 61:2 p.96 PB 288 975	NCLIS	Reviewed the status of government publications (including local, State, and Federal levels) with particular attention to crucial problems of availability and accessibility to the public; examined issues and proposed changes in government policy with respect to government documents e.g., (a) Is there a need for a national center for government documents? (b) What should be the relationship of the Government Printing Office to the national program? (c) How should state and local documents be made available nationally? (d) What role should private enterprise play in publishing government information and in assuring its accessibility? (e) How can government publications make a full contribution to the mainstream of useful and used information?
282	1978	Systems Analysis of Scientific and Technical Communication in the U.S.: The Electronic Alternative to Communication through Paper-Based Journals Annex 1: Communication Functions in S&T Annex 2: The Current Practice Annex 3: The Electronic Alternative Annex 4: The Cost Model	Donald W. King and Nancy K. Roderer	PB 281 847 PB 281 848 PB 281 849 PB 281 850 PB 281 851	NSF	Conducted to provide "a factual and analytic framework" in which to consider the electronic alternative to paper-based communication; intended for use by R&D and STI planners and policymakers for comparing total communication systems in terms of cost and benefits; to define issues and to specified data needed to resolve these issues; included four annexes

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283	1978	Government Involvement in the Innovation Process: A Contractor's Report to the Office of Technology and Assessment	Center for Policy Alternatives, MIT	Y3. T22/2:2 In 6 PB 286 545 OTA/R-73	OTA	Designed to acquaint OTA with government policies that relate to or bore upon technological innovation--the process that led to the commercial introduction of a new technology; the study included an examination of the major factors that currently influence the process of introducing goods and services to the user; these factors included the following: incentives and funding for basic research; tax, patent, procurement, and antitrust policies; regulations; size, sector, and locale of the business; subsidies; inflation rate; available technical, marketing, and management skills; credit; and the formation of capital
284	1979	Defense Logistics Agency (DLA) General Order No. 14-79				DDC redesignated as Defense Technical Information Center (DTIC); the change involved a considerable expansion in the provision of STI
285	1979	Scientific and Technical Information (STI) Activities: Issues and Opportunities Pamphlet (Limited Edition)	Robert L. Chartrand and Jane Bortnick, SPRD, CRS	Y4. Sci 2:95/xxxx	House Committee on Science and Technology; Subcommittee on Science, Research, and Technology	Reviewed Federal STI activities; identified and analyzed issues and opportunities for policy enhancement
286	1979	P.L. 96-72: Export Administration Act (EAA)		93 Stat. 503		Designed to protect national security, further U.S. foreign policy, and protect domestic economy from the excessive drain of scarce materials; specifically emphasized the export control of some technology and information related to that technology and not merely the control of goods; and "technology" designated technical data or tangible or intangible information that could be used in the design, production, manufacturing use, or reconstruction of articles and materials

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287	1979	Better Information Management Policies Needed: A Study of Scientific and Technical Bibliographic Services	GAO	PSAD-79-62 PB 298 776 ED 179 191	U.S. Congress	Discussed the management of scientific and technical bibliographic databases by the Federal Government, the existence of overlapping and duplicative bibliographic information services, the application of cost recovery principles to bibliographic information services, and the need to manage information as a resource; recommended that the Director of the Office of Management and Budget establish policies on cost recovery and required agencies to implement those policies; require agency heads to certify that funds requested to develop or operate bibliographic databases would not be used to duplicate services available elsewhere; directed each agency to designate a senior official responsible for information management; and established an interagency coordinating committee for information management; concluded that although the Federal Government spent billions of dollars to create, collect, and disseminate scientific and technical information, it paid little attention to information policies or how information activities were managed
288	1979	White House Conference on Library and Information Services (WHCLIS) convened			NCLIS	Recommended reshaping of library and information services to serve the people in more useful ways; proposed a National Library and Information Services Act
289	1979	National Science and Technology Policy Issues, 1979: Part I--A Compendium of Papers; Part II--Implementation of the National Science Policy Act	Part I Compilation Part II prepared by Dorothy M. Bates, CRS	Part I Y4. Sci 2:96/H Part II Y4. Sci 2:96/I	House Committee on Science and Technology	Part I contains 27 contributed papers organized into 3 categories: (1) the operation of OSTP; (2) the relationship among science, technology, and the economy; and (3) any other important issue in the field of science and technology policy; Part II contains a review of OSTP as a 2-year status report

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290	1979	E.O. 12168: President's Commission for a National Agenda for the Eighties		61 FR 559	President Carter	Established an independent forum to recommend an agenda and approaches for dealing with the major issues which will confront the American people during that decade
291	1980	P.L. 96-480: Stevenson-Wydler Technology Innovation Act of 1980		94 Stat. 2311		Enacted to promote technological innovation for the achievement of national economic, environmental, and social goals; designed to promote innovation and technological development in the private sector; required Federal laboratories to create offices of R&D information and assistance to promote technology transfer, and directed the DoC to create the Center for the Utilization of Federal Technology (CUFT)
292	1980	CUFT established			DoC	Mandated by P.L. 96-480; created CUFT in NTIS to produce and disseminate reports on Federal R&D to state and local governments and the private sector
293	1980	P.L. 96-511: Paperwork Reduction Act of 1980		94 Stat. 2812		Designed to promote the efficient, economical, and effective use of Federal information resources and minimize the Federal paperwork burden; designated OMB as the agency to coordinate Federal information policies; established Office of Information and Regulatory Affairs (OIRA) in OMB
294	1980	Report of the Working Group on Private Sector-Government Relationships for Scientific and Technical Information	Working Group on Private Sector-Government Relationships for STI, Howard Resnikoff, Chairman (Carole Ganz, NSF, edited the final report)	PB 80-203 102	Ad Hoc Committee on STI Policy, FCCSET (FCCSET was established in 1979)	Provided data on Federal STI centers, characterized Federal and non-Federal interactions in supplying STI and reviewed relevant economic theory; concluded that public-private conflicts were based on opposing views of the nature of information as a resource, and that government-wide coordination mechanisms and general policy guidelines would not be successful

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295	1980	Science and Technology: Promises and Dangers in the Eighties	President's Commission for a National Agenda for the Eighties: Panel on Science and Technology; Promises and Dangers	OCLC 10194002 83N77689	NSF	Concluded that greater efforts in scientific research and technological application, in both the public and private sector will be required in order to maintain economic stability during the coming decades; scientific and technological capacity should be sustained and improved; and that better understanding of science and technology is needed
296	1980	Federal and Non-Federal R&D Relationships in Providing Scientific and Technical Information: Policies, Arrangements, Flow of Funds, and User Charges	Donald W. King and Dennis McDonald	OCLC 7725904	NSF	Surveyed Federal and private sector representatives as part of FCCSET policy review of issues concerning Federal agency handling of STI; reviewed ways in which Federal Government relates to information industry, academia, and state and local governments in the provision of STI
297	1980	The Foundations of United States Information Policy	Arthur A. Bushkin, and Jane H. Yurow	PB 80-204 019	NTIA	Divided national information policies into major categories about what, whether, and how information is to be made available; categories included the legal basis for information access and dissemination and the institutional arrangements for handling the economics and management of information
298	1980	Federal Industrial Innovation Policy: A Review of Congressional and Task Force Activity	Bruce Rubinger Linda M. Noonan	PB 81-166 498	National Highway Traffic Safety Administration, DoT	Contained a retrospective analysis of the various Federal remedies designed to stimulate civilian technological innovation; the analysis included 4 major studies: National Commission on Technology, Automation, and Economic Progress (1964); the Panel on Invention and Innovation (1967); Commission on International Trade and Investment Policy (1971); and Domestic Policy Review of Industrial Innovation (1979)
299	1980	The Origins of the Turbojet Revolution	Edward W. Constant II	ISBN 0-8018-2222-X		Presented an historical analysis of the development of the turbojet engine or a model of technological change; views the development of the turbo engine in the context of its relationship to R&D and scientific progress

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300	1980	P.L. 96-517: Patent and Trademark Laws, Amendment		94 Stat. 3015		Provided for a system of administrative reexamination of patents within the Patent Office, provided for a new fee structure for the Patent Office, provided for a uniform policy governing the disposition of patent rights in government funded research; incorporated legislation separately introduced as the "University, Small Business Patent Act;" established a comprehensive and uniform policy for the ownership and licensing of inventions resulting from federally-funded R&D as it related to the ownership of such inventions by small businesses and non profit institutions, including universities and colleges, with only limited exemption, to promote the use of such inventions; encouraged industry to use federally-sponsored technology by making it easier to obtain exclusive license; also included specific language on limitations on exclusive rights regarding computer programs
301	1980	Consolidation of Federal Scientific and Technological Activities	OSTP	PB 81-132250	OSTP	Set forth 6 of the principal alternatives for major consolidation of Federal scientific and technical activities; included a discussion of the arguments for and against consolidation with respect to the 6 functions that need to be effectively performed in support of Federal scientific and technological activities; closed with a summary of the conclusions
302	1980	Special Study on Economic Change. Vol. 3-- Research and Innovation: Developing a Dynamic Nation		Y4. Ec 7-Ec 7/41/v.3	U.S. Congress, Joint Economic Committee, Special Study on Economic Change	Contained the results of a special study on the relationship between research and innovation to the U.S. economy

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303	1981	P.L. 96-516: National Science Foundation Act of 1981		96 Stat. 2007		Declared that it was the policy of the United States to encourage men and women, equally, of all ethnic, racial and economic backgrounds, to acquire skills in science and mathematics; to have equal opportunity in education, training, and employment in scientific and technical fields; and thereby to promote scientific literacy and the full use of the human resources of the Nation in science and technology
304	1981	P.L. 97-34: Economic Recovery Act of 1981		95 Stat. 172		Implemented a R&D tax credit and a tax deduction for charitable donations of R&D equipment to universities, designed to stimulate R&D; also provided for a 25 percent tax credit for the increase in a firm's qualified R&D costs above the average expenditure for the previous 3 tax years
305	1981	P.L. 97-90: DoE National Security and Military Applications of Nuclear Energy Act		95 Stat. 1163		Amended Atomic Energy Act of 1954; prescribed regulations on dissemination of specific unclassified information on atomic energy defense programs
306	1981	Issues in Information Policy	Jane H. Yurow, et al.	C 609: 80-9	DoC	Addressed "the constitutional and statutory policies for permitting, requiring, or inhibiting the availability and accessibility of information;" focused on "economic policies for distributing information or for inhibiting, managing, and facilitating its distribution to certain sectors of society"
307	1981	Computer-Based National Information Systems: Technology and Public Policy Issues	OTA	Y3. T22/2:2 C 73/6	Senate and House Committees on Judiciary, House Committee on Post Office and Civil Service	Overview study of such systems as electronic mail, credit authorization, crime information, societal impacts and resulting policy issues; major problems include a lack of focus in information policy and problems in the government's management of its own information resources
308	1981	Functions of the Smithsonian Science Information Exchange (SSIE) transferred to NTIS				SSIE superseded by Federal Research in Progress (FEDRIP); now available online through DIALOG

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309	1981	NASA's Role in Aeronautics: A Workshop Vol. 1: Summary Vol. 2: Military Aviation Vol. 3: Transport Aircraft Vol. 4: General Aviation Vol. 5: Rotorcraft Vol. 6: Aeronautical Research Vol. 7: Background Papers	NAS/NRC	81N26028 81N26029 81N26030 81N26031 81N26032 81N26033 81N26034	NASA	Results of a workshop that reviewed the state of the aeronautical industry; changes in national priorities as reflected in the Federal budget, the contributions of the NACA and the character and substance of aeronautical research under NASA; 8 possible roles for NASA vis-à-vis the future were considered
310	1981	Appearance of IBM PC			International Business Machines, Inc.	Beginnings of phenomenal growth in use of personal computers, with increased information-processing capabilities and conveniences such as online searching, downloading, and communication links
311	1981	OMB Bulletin No. 81-16			OMB	Imposed a moratorium on all new publications and ordered agencies to eliminate all but "those essential to the accomplishment of agency missions"
312	1981	Information and Telecommunications: An Overview of Issues, Technologies and Applications	Jean-Paul Emard, CRS	Y4. Sci 2:97/J	House Committee on Science and Technology; Subcommittee on Science, Research and Technology	Examined the roles of information and telecommunications technology in government and society by providing an overview discussion of the key subject areas; provided background information on the technologies involved in collecting, procuring, storing, and transmitting information; identified significant potential impacts of this technology on individuals and institutions; and highlighted areas where congressional action was particularly likely or appropriate
313	1981	Statement on Federal Audiovisual Aids and Publications		Public Papers of the Presidents. Ronald Reagan. 1981 pp 364-365	President Reagan	Announced an OMB-headed campaign to eliminate "wasteful spending" on Federal publications and audiovisual production
314	1981	OIRA established in OMB			OMB	Mandated by P.L. 96-511; OIRA became the group with greatest amount of control over the Federal information process

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315	1981	OMB Circular 82-85: Reform 88: Elimination, Consolidation, and Cost Reduction of Government Publication			OMB	Led to significant reductions in government information (including STI) collection, production, and dissemination
316	1981	H.R. 3137: The Information Science and Technology Act (House Committee Serial No. 25)		Y4.Sci 2:97/25	House Committee on Science and Technology; Subcommittee on Science, Research, and Technology	Included hearings on H.R. 3137 to establish an independent Institute for Information Policy and Research to formulate information policy, coordinate research, and promote development and use of scientific and technical information systems; also aimed to transfer to the new institute certain functions of the NTIA and NSF
317	1982	OMB Bulletin 81-16 Supplement No. 1			OMB	Canceled all current Circular A-3 clearance and required Executive agencies to resubmit all periodicals for review
318	1982	Analysis of Hearings on H.R. 3137. The Information Science and Technology Act (Committee Print)	Jane Bortnick, CRS	Y4.Sci 2-97/DD	House Committee on Science and Technology; Subcommittee on Science, Research, and Technology	Analyzed the Subcommittee's hearings on H.R. 3137; included conclusions and recommendations regarding the major policy issues and the various alternative courses of action
319	1982	E.O. 12356: National Security Information		47 FR 14874 47 FR 15557	President Reagan	Recognized the need for an informed public, but not at the expense of national security; expanded categories for classification; use of classification guides not mandatory; declassification and reclassification permitted; and unauthorized disclosure not basis for declassification; instituted concept "when in doubt, find out"
320	1982	Value of the Energy Data Base	Donald W. King, et al.	DE 82014250	DoE	Described process by which the value of STI is increased; assessed value in terms of extent of use, willingness to pay, and the savings resulting from the application of the information obtained; found that the value of the Energy Database to searchers, readers, and DoE was $3.7 billion

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321	1982	Summary and Analysis of the Role of NASA in Aeronautics Research and Development	Robert C. Frazer Bernard Maggin	NASA CR-170 110	NASA	Investigated the role and need for continued U.S. government support of aeronautical R&D; concluded that U.S. commercial aviation would not and could not invest in the R&D necessary to ensure long-term industry leadership
322	1982	Scientific Communication and National Security (the Corson Report)	Panel on Scientific Communication and National Security, Committee on Science, Engineering, and Public Policy	PB 83-157800 ISBN 0-309-03332-2	NAS, NAE, Institute of Medicine (IOM)	Noted evidence of the increased acquisition of U.S. technology and secrets by its adversaries; taking into account the viewpoints of government, industry, and academia, the panel presented a set of principles to resolve current problems in areas such as classification, the application of ITAR and Export Administration Regulations (EAR), and technology transfer to the Third World
323	1982	MITI and the Japanese Miracle: The Growth of Industrial Policy, 1925 - 1975	Chalmers A. Johnson	OCLC 8310848 ISBN 0-8047-1206-9		Focused on the Japanese economic bureaucracy, particularly on the famous Ministry of International Trade Industry (MITI); concluded that the history of MITI is central to the economic and political history of modern Japan; and compared the Japanese "approach" with Western-type "approaches", especially the U.S. which is characterized as confrontalization
324	1982	Technology Transfer, Productivity, and Economic Policy (See also The Economics of Technological Innovation, Research and Innovation in the Modern Corporation, and The Production and Application of New Industrial Technology.)	Edward Mansfield, Anthony Romeo, Mark Schwartz, David Teece, Samuel Wagner, and Peter Broch	ISBN 0-393-95222-3	NSF	Presented findings regarding the rate, channels, and costs of international technology transfer, the kinds of technology transferred overseas, the benefits of such transfer to the recipients, the effects of international technology transfer on U.S. R&D expenditures, the effects of the composition of an industry's or firm's R&D expenditures on its rate of productivity increase, the size and determinants of imitation costs, the characteristics of the nation's engineering labor force, and the nature and adequacy of Federal programs in support of civilian technology

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325	1982	Aeronautical Research and Technology Policy Vol. 1: Executive Summary Vol. 2: Final Report (the Keyworth Study)	Agency Working Group	Pr Ex 23.2: Ae 8 v.1/2 83N23268	OSTP	Reviewed the appropriateness and effectiveness of U.S. aeronautical R&D policies and the role of the Federal Government in supporting aeronautical R&D; considered the role of the Federal Government as a transfer agent for knowledge diffusion; concluded that Federal involvement in funded aeronautical R&D is necessary if the U.S. is to remain internationally competitive
326	1982	"The Commercial Aircraft Industry" Chapter 3 in Government and Technical Progress: A Cross-Industry Analysis	David C. Mowery Nathan Rosenberg (Richard R. Nelson, ed)	OCLC 8305790 ISBN 0080288375		Examined the innovation process the U.S. commercial aircraft industry, focusing particularly upon the role of U.S. S&T policy in affecting the pace and structural context within which technological innovation had occurred; concluded that U.S. Government policy has influenced the adoption of innovation in the U.S. commercial aircraft industry through "supply-push/demand-pull" activities
327	1982	Public Sector/Private Sector Interaction in Providing Information Services	Public Sector/Private Sector Task Force	Y3. L 61:2 P96/2	NCLIS	Considered the role of government in disseminating information, and presented a series of 7 principles and 27 recommendations including: 1) open access to information generated by the Federal Government; 2) reliance upon libraries and private sector organizations (both for-profit and not-for-profit), to make readily available information that can be distributed by the Federal Government; 3) a leadership role for government, rather than a management role; and 4) limiting direct government intervention in the marketplace
328	1982	A Library and Information Science Research Agenda for the 1980s Final Report Summary Report	Carlos A. Cuadra	ED 211 124 ED 211 123	Department of Education (DoEd)	Presented the results of a project undertaken to identify a national research agenda for the 1980s in the field of library and information science; reviewed project background and design

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329	1982	E.O. 12369: President's Private Sector Survey on Cost Control in the Federal Government the Grace Commission (revoked by E.O. 12534: Continuance of Federal Advisory Committees-- 3 CFR 391, September 30, 1985)		47 FR 28899	President Reagan	Established the Grace Commission to identify opportunities for increased efficiency and reduced costs achievable by executive action or legislation; to determine areas where managerial accountability could be enhanced and administrative controls improved, to suggest short- and long-term managerial operating improvements, and specific areas where further study could be justified by potential savings; and to provide information and data relating to governmental expenditures, indebtedness, and personnel management
330	1982	The Sporty Game	John Newhouse	ISBN 0-394-51447-5		Provided an episodic history of the commercial airline business in the era of wide-body airplanes; focused on the competition in the development and marketing of commercial aircraft and stressed their importance to U.S. economic growth and vitality
331	1982	P.L. 97-219: Small Business Innovation Development Act of 1982 (extended for 5 years by P.L. 99-443)		96 Stat. 217 100 Stat. 1120		Established the Small Business Innovation Research (SBIR) program, designed to strengthen the role of the small, innovative firms in federally-funded R&D, and to use Federal R&D as a base for technological innovation to meet agency needs and to contribute to the growth and strength of the Nation's economy; required each Federal agency with an extramural R&D budget in excess of $100 million is required to establish an SBIR program, and to set aside annually 1.25 percent (phased in over a 4-year period; 5 years for DoD) of the agency R&D budget to fund the SBIR program
332	1983	P.L. 98-94: Department of Defense Authorization Act of 1984		97 Stat. 690		Title XII, Part B, Section 1217 empowered the Secretary of Defense to withhold certain unclassified data from public disclosure; DoD could refuse a FOIA request for unclassified technical data because the data can be export-controlled

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333	1983	President's Private Sector Survey on Cost Control: Report on Privatization; Report on Research and Development	Grace Commission	PB 84-173 210 PB 84-173 269	President Reagan	Reported the major recommendations that, when implemented, could result in a 3-year cost savings with the use of more effective cost control measures
334	1983	Federal Laboratory Review Panel: Report of the White House Science Council (FLRP) (the Packard Report) (See also Progress Reports on Implementing the Recommendations of the White House Science Council's Federal Laboratory Review Panel-2 vols.)	David Packard, Chairman, FLRP	DE 83902794 PB 83-255 620 PB 85-185 072 PB 85-185 080	OSTP	Found that the Federal laboratories had several serious deficiencies and that several laboratories did not meet the quality and productivity standards expected of them; recommended greater accountability and a review and redefinition of missions
335	1983	Cooperative interagency group (CENDI) formed				Informal effort created to coordinate STI activities of member organizations; includes DoC, DoE, NASA, and DoD
336	1983	"Improving R&D Productivity: The Federal Role," Science 222: 4620 (14 October 1983): 133-135	Lewis M. Branscomb			Concluded that Federal support for the review and packaging of hard won new knowledge continues to languish, and yet accurate, accessible data are critical, not only in every R&D project, but in the most advanced manufacturing processes; ensuring reliable, retrievable data is not a function that can be left to the professional societies, the publishing industry, or to the private sector; put forth a 6-point national science and technology data policy and suggested that progress ultimately will depend on an overall science and technology policy, the first priority of which is to make available existing knowledge

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337	1983	Long Range Goals in International Telecommunications and Information: An Outline for U.S. Policy (Senate Print 98-22)	NTIA	Y4. C 73/7: S. prt. 98-94	U.S. Congress	Provided a comprehensive delineation of the goals, policies, strategies, and principal issues in the international telecommunications and information field to improve the formulation and execution of government policy; concluded that the only effective way to ensure consistent and effective policy is for private enterprise, Congress, and the Executive Branch to assert a level of commitment to the field commensurate with its significance for U.S. interests and to see that a proper organizational scheme is established with clear ongoing responsibility for maintaining high performance in policy formulation and implementation
338	1983	International Telecommunications and Information Policy: Selected Issues for the 1980s	Jane Bortnick, CRS	Y4. F 76/2: S. prt. 98-94	Senate Committee on Foreign Relations	Stated that rapid technological advances in telecommunications offered the opportunity for new products and services; presented policymakers with the opportunity to exploit their potential, provided existing government and regulatory structure and to develop innovative approaches
339	1983	Putting Knowledge to Work: Facilitating the Diffusion of Knowledge and the Implementation of Planned Changed	Edward M. Glaser, Harold H. Abelson, and Kathalee N. Garrison	OCLC 0875895		Reported on an early attempt to collect and distill the relevant literature from the social sciences associated with the diffusion of knowledge and knowledge utilization; looked at the barrier and gateways related to dissemination, transfer, and utilization of knowledge; and concentrated on the development of strategies to facilitate knowledge diffusion in organization and institutionalized settings
340	1983	Diffusion of Innovation	Everett M. Rogers	ISBN 0-02-926650-5		Presented a foundation of diffusion research; included a theoretical framework, a model, and theoretical viewpoints; indicated there are 4 key elements in the diffusion process--the innovation, channels of communication, time, and the social system

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341	1983	E.O. 12428: President's Commission on Industrial Competitiveness (See also E.O. 12440.)		48 FR 30085	President Reagan	Established a commission to review means of increasing the long-term competitiveness of United States industries at home and abroad, with particular emphasis on high technology, and provide appropriate advice to the President, through the Cabinet Council on Commerce and Trade, and the Department of Commerce
342	1983	P.L. 98-127: Federal Anti-Tampering Act		97 Stat. 831		Extended (Section 4) the terms of the patents required to undergo compulsory Federal safety testing of a new product
343	1983	OMB Circular A-76: Performance of Commercial Activities			OMB	Designed to stimulate domestic economy and reduce government spending by relying on public sector for products and services; distinguishes between a commercial activity and a governmental function (a governmental function is an activity "so intimately related to the public interest as to mandate performance by government employees"); while R&D was exempt, several commercial activities supporting R&D were not (Circular identifies some of these activities; among them were audiovisual products and services, automatic data processing, library operations, communications systems, printing and reproduction, cataloging, and special studies and analyses.)
344	1983	Towards a National S&T Data Policy: Collected Presentations from a Workshop, Library of Congress		OCLC 10291341	NAS Numerical Data Advisory Board, House Committee on Science and Technology, and CRS	Discussed importance of scientific and technical data for solving research questions and the appropriate role of the U.S. government in creating, validating, and disseminating such data
345	1983	Use and Value of Defense Technical Information Center Products and Services	N.K. Roderer, D.W. King, and S.E. Brovard	AD-A130 805	DTIC	Attempted to determine the economic value associated with DTIC products, including DoD technical reports; determined use, purpose of use, and readership of those reports; mentions ADD (automatic document distribution) program

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346	1983	INTERNET (Interactive Network) established (See The Matrix by John S. Quarterman.)		ISBN 1945773	NSF	Linked networks that used the networking protocols developed on the ARPANET and shared a common addressing scheme; improved national and international communication capabilities; used by Federal, private, and industrial researchers
347	1983	P.L. 98-497: National Archives and Records Administration Act of 1984		98 Stat. 2280		Established the National Archives and Records Administration (NARA) as independent agency; transferred certain responsibilities from GSA
348	1984	Science as Intellectual Property: Who Controls Research?	Dorothy Nelkin	ISBN 0-02-949090-1		Examined numerous aspects of this multifaceted problem (Science as Intellectual Property) and presented a balanced discussion of the complex issues from varying points of view, including the interests of scientists, the right of citizens to be informed, and the legitimate security needs of government and industry; used many examples and cases to illustrate the dilemmas discussed; and outlined the problems of negotiating consistent and acceptable policies for ownership and control of scientific information
349	1984	P.L. 98-365: Land Remote-Sensing Commercialization Act of 1984		98 Stat. 451		Stated U.S. policy is to acquire, disseminate, and, where appropriate, commercialize remote-sensing data; set procedures for transition to fully private financing, ownership and operation of remote-sensing space systems

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350	1984	P.L. 98-373: Arctic Research and Policy Act of 1984-- (Title II) The National Critical Materials Act of 1984		98 Stat 1248		Created the National Critical Materials Council to advise the President on policies related to strategic and critical materials and to review Federal programs, activities, and budget priorities, with respect to these policies; monitors domestic and foreign industry trends and requests to ensure that national materials policies reflect the latest developments in technology and resource availability
351	1984	P.L. 98-462: National Cooperative Research Act of 1984 (the Joint R&D Act)		98 Stat. 1815		Modified the operation of the antitrust laws to encourage the formation of R&D joint ventures to increase the effectiveness of technology development and to improve the economic competitiveness of the United States; also provided for antitrust law immunity (including both civil and criminal) for joint R&D ventures that complied with its requirements and allowed firms engaged in joint ventures to be reimbursed for their costs in defending themselves in frivolous lawsuits brought against them under the antitrust laws
352	1984	P.L. 98-473: Counterfeit Access Device and Computer Fraud and Abuse Act		98 Stat. 2190		Declared that use of counterfeit credit cards, use of computers without authorization or for unauthorized purposes, and modification or disclosure of computer-stored data are criminal offenses
353	1984	P.L. 98-525: DoD Authorization Act of 1984: Title XII "Defense Procurement Act of 1984"		98 Stat. 2588		Stated that the legitimate propriety interest of the U.S. and of a contractor in technical or other data shall be defined in regulations prescribed as part of the single system of government-wide procurement regulations; such regulations may not impair any right of the U.S. or of any other contractor with respect to patents or copyrights or any other right in technical data otherwise established by law

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354	1984	E.O. 12490: National Commission on Space		49 FR 40393	President Reagan	Established a commission to study existing and proposed U.S. space activities; to formulate an agenda for the civilian space program, to identify long range goals and policy options
355	1984	P.L. 98-620: Trademarks -- State Justice Institute -- Semiconductor Chips -- Courts -- Patents (the Trademark Clarification Act of 1984)		98 Stat. 3335		Amended the "Trademark Act of 1946;" established the State Justice Institute; included as Title III the "Semiconductor Chip Protection Act of 1984" which addressed chip protection; Title V allowed GOCO laboratories, operated by universities, to make decisions at the laboratory level regarding the award of licenses for laboratory-generated patents; permitted private companies, regardless of size, to obtain exclusive license for the full life of the government patent (Prior restrictions on large firms allowed exclusive license for any 5 of the 17 years of the patent.)
356	1984	P.L. 98-622: Patent Law Amendments Act of 1984		98 Stat. 3383		Strengthened the force of patented inventions outside of the U.S. (Title I), modified patent and trademark office procedures (Title II), and established the National Commission on Innovation and Productivity (Title III)
357	1984	"A Visit to the Wasteland of Federal Scientific and Technical Information Policy," Journal of the American Society for Information Science 35:3, May 1984, pp. 179-184	Andrew A. Aines			Detailed what the author describes as a "precipitous retreat from overall planning and management of Federal STI;" detailed the failures and weaknesses of Federal STI policy for the previous 20 years; and stated that STI policy in the U.S. had been virtually nonexistent since the demise of COSATI in 1972
358	1984	Department of Defense Directive 5230.25: "Withholding of Unclassified Technical Data from Public Disclosure"		49 FR 48040 32CFR Part 250	DoD	Prescribed and assigned responsibilities for the dissemination and withholding of unclassified technical data

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359	1984	FLC broadened to Federal Library and Information Center Committee (FLICC)				Membership and activities expanded to address issues of information accessibilty and status of Federal libraries; first of annual series of forums held on policies that affect the management and use of Federal information
360	1984	A Study of the Value of Information and the Effect on Value of Intermediary Organizations, Timeliness of Services and Products, and Comprehensiveness of the EDB Vol. 1: The Value of Libraries as an Intermediary Information Service Vol. 2: The Value of The Network Energy Software Center and the Radiation Shielding Information Center Vol. 3: The Effects of Timeliness and Comprehensiveness on Value	King Research, Inc.	DE 85003670 ED 257477	DoE	Included the results of an investigation into the value of information generated from DoE R&D funding and the contribution that the Energy Data Base and its derivative products and services make to the value of their information
361	1984	The Availability of Japanese Scientific and Technical Information in the United States	Nancy Miller, CRS	Y4. Sci 2:98/LL	House Committee on Science and Technology; Subcommittee on Science, Research, and Technology	Analyzed the major issues on the availability of Japanese STI and outlined the various alternatives for action; described Japan's efforts to coordinate STI; discussed current U.S. efforts to access Japanese STI; analyzed existing barriers to acquiring and disseminating these data; and summarized recommendations on the role of the Federal Government
362	1984	Provision of Federal Government Publications in Electronic Format to Depository Libraries (Senate Print 98-260)	Ad Hoc Committee on Depository Library Access to Federal Automated Data Bases	Y4. P 93/1: P 96/2	Joint Committee on Printing (JCP)	Noted that provision of electronic information to depository librarians was technically feasible; recommended investigation of economic feasibility through pilot projects

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363	1984	Scientific Communications and National Security (House hearings)		Y4. Sci 2:98/100	House Communication on Science and Technology; Subcommittees on Science, Research, and Technology, and Investigations and Oversight	Examined the possible effects on scientific research and scientific exchange brought about by new or proposed national security restrictions
364	1984	President's Private Sector Survey on Cost Control: Report to the President (the Grace Commission)	J. Peter Grace, Chairman	PB 84-161 587	President Reagan	Offered a far-reaching series of recommendations to maximize efficiencies of Federal Government operations; the Grace Commission specifically recommended that NTIS **not** be privatized, citing the need for an expanded NTIS role in R&D coordination
365	1984	Scientific and Technical Information Transfer; Issues and Options	Tora K. Bikson, B.E. Quint, and L.L. Johnson, RAND Corporation	PB 85-150 357 Rand Note 2131	NSF	Identified and assessed ways to improve the transfer to potential users of knowledge generated by federally funded research in science and technology; examined problems of information quality control and discussed processes by which scientific and technical knowledge can be tailored and packaged for users; provided an overview and evaluation of Federal policies and priorities and an assessment of alternative policy options
366	1984	National Security Decision Directive (NSDD) 145: National Policy on Telecommunications and Automated Information Systems Security [Reprinted in Hearings Before the House Committee on Government Operations re Computer Security Act of 1987, pp. 528-537]		Y4. G 74/7: C 73/26/985	President Reagan	Called for a comprehensive approach on the grounds that even unclassified information, in the aggregate, can compromise security

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367	1985	Federal Organization for Technological Innovation (House hearings)		Y4. Sci 2:98/127	House Committee on Science and Technology; Subcommittee on Science, Research, and Technology	Contained deliberations regarding the following 6 bills designed to strengthen and reorganize federal programs to promote U.S. technological innovation and competitiveness: H.R. 481, the National Technology Foundation Act; H.R. 4361, the Advanced Technology Foundation Act; H.R. 4047, the Robotics and Automated Manufacturing Systems Research and Education Act; H.R. 4415, the Manufacturing Sciences and Technology Research and Development Act; H.R. 1243, the Economically Strategic Industrial Research and Development Act; and H.R. 2525, the National Commission on Technological Innovation and Industrial Modernization
368	1985	Keeping the Nation's Secrets: A Report to the Secretary of Defense	R.G. Stilwell, Chairman, Commission to Review DoD Security Policies and Practices	AD-A 161 998	Secretary of Defense	Contained a review of DoD security policies and practices and published as a 3-part report; contains 63 recommendations for change (part 1); management issues (part 2); and resource management (part 3)
369	1985	Lost at the Frontier: U.S. Science and Technology Policy Adrift	Deborah Shapley and Rustum Roy	ISBN 0-89495-041-X		Offered as an experiment in science criticism, the authors claimed that U.S. science policy was adrift, that science was divorced from application, and that U.S. science policy must be tied to technology
370	1985	The Role of Technical Information in U.S. Competitiveness with Japan (House hearings)		Y4. Sci 2:99/27 86N16152	House Committee on Science and Technology; Subcommittee on Science, Research and Technology	Examined the progress made on making Japanese STI available in the U.S.; also investigated the comparative strengths of the U.S. and Japan in selected high-technology fields
371	1985	An Agenda for a Study of Government Science Policy		OCLC 11773033 Y4. Sci 2:98/MM	House Committee on Science and Technology; Task Force on Science Policy	Contained a proposed agenda for the comprehensive study of U.S. science policy; focused on the "issues of maintaining America's leadership in science in view of the changing environment facing us over the next decade"

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372	1985	The International Flow of Scientific and Technical Information (Reprinted in GIQ 3, 1986, 163-178)	Barbara J. Meredith	LC 1.32/2:In 3/2	Forum on Federal Information Policies, Federal Library and Information Center Committee, Library of Congress	Highlighted Federal policy issues raised by dramatic increases in transborder flow of STI: "DoD publication policy, national and data security," security controls and their impact on scientific conferences and publishing; discussed means of increasing STI flow in the U.S. through multilateral information exchange and improved monitoring and acquisition of foreign literature
373	1985	Striking a Balance: National Security and Scientific Freedom--First Discussions	Harold C. Relyea, Editor	OCLC 12680731	American Association for the Advancement of Science (AAAS), Committee on Scientific Freedom and Responsibility	Expressed growing concern over how to achieve balance between national security and open exchange of scientific information, a problem for government producers of STI databases
374	1985	OMB Circular A-3: Government Periodicals			OMB	Required Federal agencies to seek OMB approval for periodicals; to submit an annual statistical report on agency publications; and to maintain an OMB-approved publications central plan
375	1985	Information Technology R&D: Critical Trends and Issues		PB 85 245 660 Y3. T22/2:2 In 3/3 OTA-CIT-268 ISBN 0-080-33648-5	OTA	Assessed the current state of R&D in computer architecture, artificial intelligence, fiber optics, and software engineering; portrayed information technology as central to improving the effectiveness of all Federal R&D, the delivery of government products and services, and the U.S. economy and national security
376	1985	Federal Supercomputer Programs and Policies (Committee Print)		Y4. Sci 2:99/44	House Committee on Science and Technology; Subcommittees on Energy Development and Applications and Science Research and Technology	Recommended that the NSF establish National Supercomputing Centers to promote and facilitate the use of advanced information technologies in data collection, storage, transfer, analysis, and presentation; aimed at both public and private sector researchers

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377	1985	OMB Circular A-130: The Management of Federal Information Resources		50 FR 52730-51 51 FR 461	OMB	Issued by OMB's OIRA, set information and information resources policy for Federal agencies; emphasized cost containment and reliance on private sector for dissemination activities (overall "the expected public and private benefits derived from government information...should exceed the public and private costs of the information;") maintained that only information necessary for the proper performance of agency functions and having practical utility as determined by the Director of the OMB is to be created or collected; limited dissemination to the information services and products that are required specifically by law or absolutely "necessary for the proper performance of agency functions" and performed in a cost-effective way with maximum reliance on the private sector, as detailed in OMB Circular A-76 (revised, 1983)
378	1985	NSDD 189: National Policy on the Transfer of Scientific, Technical and Engineering Information [Reprinted in Hearings before the House Committee on Government Operations re Computer Security Act]		Y4. G 74/7: C 73/26/985	President Reagan	Exempted unclassified basic research from restrictions of 1982 E.O. 12356
379	1985	A Strategic Analysis of Science and Technology (See "The Uses of Scientific and Technical Information" pp. 98-123.)	Harvey A. Averch	OCLC 17806424 ISBN 0801824672		Presented policy debates and disputes in significant areas of national science and technology policy; included a chapter on the uses of scientific and technical information

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380	1985	National Aeronautical R&D Goals: Technology for America's Future	OSTP Working Group	87N12405	OSTP	Proposed 3 national R&D goals to clarify and focus the direction of U.S. aeronautical R&D; these goals clearly emphasized knowledge production at the expense of knowledge transfer and did not mention the role of the Federal Government in transferring the results of U.S. government funded R&D to the U.S. aeronautical community
381	1985	Competitive Status of the U.S. Civil Aviation Manufacturing Industry: A Study of the Influences of Technology in Determining International Industrial Competitive Advantage	U.S. Civil Aviation Manufacturing Panel, Committee on Technology and International Economic and Trade Issues, NAE	PB 88-100 334	NASA, NSF	Reported on the influence of technology and technological innovation in determining the international competitiveness of the U.S. commercial aviation industry; examined U.S. government policies and practices that might2two bear on technological innovation and adoption in the U.S. commercial aviation industry
382	1985	U.S. Competitiveness in the World Economy	Bruce R. Scott and George C. Lodge	ISBN 0-87584-160-0		Contained the results of Harvard University's Business School Collaquium entitled "U.S. Competitiveness in the World Economy;" described and evaluated U.S. changing position in the world economy and focused on the strategy by which the U.S. determines its place in the world economy
383	1985	Global Competition: The New Reality--The Report of the President's Commission on Industrial Competitiveness	John A. Young, Chairman of the President's Commission	Pr 40.8-C 73/G 51/V. 1-2 OCLC 22562463	President Reagan	Contained recommendations on ways to improve the private sector's ability to compete in world markets, detailed background on which the Commission based its recommendations, and outlined the respective roles of the private sector and government in meeting the competitive challenge
384	1986	P.L. 98-443: Civil Aeronautics Board Sunset Act of 1984		98 Stat. 1703		Amended the Federal Aviation Act of 1958 to terminate certain functions of the Civil Aeronautics Board and transferred certain functions to the Secretary of Transportation

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385	1986	The Federal Role in Research and Development: Report of a Workshop (See Papers Commissioned for a Workshop on the Federal Role in Research and Development.)	Kevin Finneran for the Committee on Science, Engineering, and Public Policy (COSEPUP)	DE 88004817 OCLC 23162360	NAS, NAE, IOM	Summarized 2 days of intensive discussions on two overlapping topics: (1) capabilities for measuring economic returns on Federal investments in R&D, and (2) principles for Federal support of applied research; predictably, while both topics were illuminated and the questions about them sharpened, in neither case did firm answers appear
386	1986	P.L. 99-382: Japanese Technical Literature Act of 1986		100 Stat. 811		Amended the Stevenson-Wydler Innovation Act of 1980; introduced a variety of organizational and financial measures to encourage U.S. professional societies to acquire, screen, and translate Japanese literature containing STI; authorized NTIS and other offices within the DoC to acquire and translate selected Japanese technical reports and documents that might be of value to Federal agencies and U.S. industry
387	1986	American Science and Science Policy Issues: Chairman's Report [See also Science Policy Study Background Reports and Hearings (Vol. 1-24) Y4. Sci 2-99]		Y4. Sci 2-99/AA	House Committee on Science and Technology	Detailed the policy issues as they relate to American Science; established an agenda for the Task Force on Science Policy
388	1986	Science Policy Study Background Report No. 1: A History of Science Policy in the United States, 1940 - 1985		Y4. Sci 2-99/R	House Committee on Science and Technology, Task Force on Science Policy	Provided a concise, historical overview of the policy issues and debates that helped shape the relationship between government and science in the U.S. since 1940; paid special attention to the evaluation of science policy planning mechanisms, along with the on going development of Executive agency science programs and periodic attempts to coordinate the Nation's overall policy effort; includes a Chronology, Federal Science Policy Development, 1787 to 1984

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389	1986	Science Policy Study Background Report No. 2, Part A: Bibliography of Studies and Reports On Science Policy and Related Topics, 1945-1985 Part B: Bibliography of Reports by the National Academy of Sciences, 1945 - 1985	Part A: William Boesman, CRS Part B: Michael Davey, CRS	Y4. Sci 2-99/HH	House Committee on Science and Technology, Task Force on Science Policy	Part A contained 8 bibliographies covering science policy reports and studies published 1945-1985 including major science policy studies and reports; congressional hearings and reports, science and engineering manpower; science policy studies prepared by GAO, CRS, OTA and CBO; and historical studies covering Federal research agencies; Part B contained a bibliography of reports issued by the NAS, NAE, and the IOM on Science Policy
390	1986	Science Policy Study Background Report No. 3: The Nobel-Prize Awards in Science as a Measure of National Strength in Science	Christopher T. Hill and Joan D. Winston, CRS	Y4. Sci 2-99/S	House Committee on Science and Technology, Task Force on Science Policy	Concluded that the difference in time between award of the prize and the time the research was done, the fact that many award winners are born and educated in a country different than their citizenship at the time of the award, and the very small number of award winners involved raise questions about the use of Nobel awards as good measures of national strength in science
391	1986	Science Policy Study Background Report No. 4: World Inventory of "Big Science" Research Instruments and Facilities	William Boseman, CRS	Y4. Sci 2-99/DD	House Committee on Science and Technology, Task Force on Science Policy	Included specific information about each facility and an analysis of the extent of international cooperation in their construction and use; included a list of aeronautical research institutes and facilities
392	1986	Science Policy Study Background Report No. 5: The Impact of Information Technology on Science	Jane C. Bortnick and Nancy Miller, CRS	Y4. Sci 2-99/T	House Committee on Science and Technology, Task Force on Science Policy	Examined the impact of advances in information technology on scientists and research institutions, and on the dissemination and use of research results; outlined issues in debate over appropriate role of the Federal Government in the development and use of information technology in the conduct of research

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393	1986	Science Policy Study Background Report No. 6: Research Policies for the Social and Behavioral Sciences	Genevieve J. Knezo, CRS	Y4. Sci 2-99/U	House Committee on Science and Technology, Task Force on Science Policy	Examined the governance, use, and support of the behavioral and social sciences in the U.S. since 1945; estimated the size of the social and behavioral research community; analyzed previous Federal support and non-Federal support and reviewed the advantages and disadvantages of using these research results in decision-making
394	1986	Science Policy Study Background Report No. 7: Expertise and Democratic Decisionmaking: A Reader	Charles H. Levine and Peter M. Brenda, CRS	Y4. Sci 2-99/EE	House Committee on Science and Technology, Task Force on Science Policy	Included descriptions and analyses of other historical cases regarding science and government from the past – Bush Report (1945) period (Part 1) where similar issues were debated; to the (Part 2) place of science and expertise in the broadest context of how experts can and should function on a democratic system of government
395	1986	Science Policy Study Background Report No. 8: Science Support by the Department of Defense	Genevieve J. Knezo, CRS	Y4. Sci 2-99/II	House Committee on Science and Technology, Task Force on Science Policy	Reviews the history, policies, and the past, present, and future import of DoD's role in the conduct and support of basic and applied scientific research; provides an historical perspective; discusses the role played by the DoD laboratories, the similarities and differences in funding mechanism used by the DoD and the DoD policies for the support of basic and applied research in universities
396	1986	Science Policy Study Background Report No. 9: Demographic Trends and the Scientific and Engineering Work Force	OTA	Y4. Sci 2-99/CC	House Committee on Science and Technology, Task Force on Science Policy	Examined the implications of long-term demographic trends for engineering and scientific personnel policy and the barriers to and future trends in the participation of women and minorities in engineering and science careers
397	1986	Science Policy Study Background Report No. 10: Regulatory Environment for Science	OTA	Y4. Sci 2-99/Y	House Committee on Science and Technology, Task Force on Science Policy	Examined the social and legal forces that act to restrict or regulate scientific and engineering research in the U.S.; looked at the entire "regulatory environment" for research, analyzed the structure and mechanisms of regulation, and identified policy issues that might require congressional action in the future

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398	1986	Science Policy Study Background Report No. 11: Alternative Mechanisms of Research Support: Inventory and Assessment	GAO	Y4. Sci 2-99/FF	House Committee on Science and Technology, Task Force on Science Policy	Examined the funding mechanisms (individual project support, program support, and center support) used to provide financial support for scientific research and determined how these funding mechanisms affect the conduct of research and import the institutions who provide the support and those who conduct the research
399	1986	Science Policy Study Background Report No. 12: Research Funding as an Investment: Can We Measure the Returns?	OTA	Y4. Sci 2-99/Z	House Committee on Science and Technology; Task Force on Science Policy	Concluded that while there were some quantitative techniques that might be of use to Congress in evaluating specific areas of research, basic research was not amenable to the type of economic analysis that might be used for applied research or product development; suggested that expert analysis, openness, experience, and considered judgment were better tools
400	1986	E.O. 12552: Productivity Improvement Program for the Federal Government		51 FR 7041	President Reagan	Established a government-wide program to improve the quality, timeliness, and efficiency of services provided by the Federal government; the goal of the program was to improve the quality and timeliness of service to the public, and to achieve an annual average productivity increase of 20% in appropriate functions
401	1986	Technological Innovation Strategies for a New Partnership (See "Federal Policies Towards Civilian Research and Development: A Historical Overview" by John M. Logsdon, pp. 9-26.)	Denis O. Gray, Trudy Solomon, William Hetzner	ISBN 0-444-70033-1		Concluded that the study of technological innovation requires a multidisciplinary perspective, that the number and variety of policies and programs designed to accelerate technological innovation have increased, and that little has been done to organize and synthesize
402	1986	NSFNET (National Science Foundation Network) created			NSF	Implemented a high-speed data communication "backbone" to link the National Supercomputing Centers and their networks

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403	1986	NLM joins CENDI				Expanded interagency coordinating group to include NLM
404	1986	DoE/RECON discontinued			DoE	Replaced by the OSTI Automated Retrieval System (OARS); OARS is a computerized information storage and retrieval system for the DoE databases; provided access to the Energy Data Base (EDB) for current year only, the DoE Research-in-Progress (RIP), and varying specialized databases
405	1986	"Global Competition in a Salient Industry: The Case of Civil Aircraft" Chapter 16 in Competition in Global Industries edited by Michael E. Porter	M. Y. Yoshino	ISBN 0-87584-140-6		Examined global competitiveness in commercial aircraft; presents a historical view of the economic factors leading to a global economy for commercial aircraft
406	1986	P.L. 99-383: National Science Foundation Authorization Act of Fiscal Year 1987		100 Stat. 813		Amended the NSF Act of 1950 "to provide a central clearinghouse for the collection, interpretation,and analysis of data on scientific and engineering resources and to provide a source of information for policy formulation by other agencies of the Federal Government;" directed the OSTP to undertake a study of critical problems and current and future options regarding communications networks for research computers, including supercomputers at universities and Federal research facilities in the U.S.
407	1986	The Positive Sum Strategy: Harnessing Technology for Economic Growth	Ralph Landau and Nathan Rosenberg, eds.	ISBN 0-309-03630-5		Contained chapters written by engineers who are knowledgeable about technology and technological innovation and by economists who are knowledgeable about the functions of markets; investigated how the U.S. innovative process compares with that of its principle competitors and how decentralized innovation activity works in different industries and different forms of organizations

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408	1986	Science in the Federal Government: A History of Policies and Activities 2nd ed.	A. Hunter Dupree	ISBN 0-8018-33817-7	NSF	Traced the development of the policies and activities of the federal government in science from the establishment of the federal Constitution to the year 1940
409	1986	P.L. 99-474: Computer Fraud and Abuse Act		100 Stat. 1213		Strengthened and expanded Federal computer crime legislation; added new sections to P.L. 98-473 (1984)
410	1986	P.L. 99-500: Paperwork Reduction Reauthorization Act		100 Stat. 1783		Increased OMB's responsibility for the dissemination of information; explicitly included "dissemination" as an IRM function
411	1986	Electronic Collection and Dissemination of Information by Federal Agencies: A Policy Overview (House Report 99-560)		Y1.1/8:99-560	House Committee on Government Operations; Subcommittee on Government Information, Justice, and Agriculture	Outlined Federal information policy goals. Assessed the current status of and made recommendations concerning public access to agency information, copyright policy, user fees, and competition with the private sector
412	1986	Improving the Transfer and Use of Scientific and Technical Information: The Federal Role Vol. 1: Summary and Conclusions Vol. 2: Problems and Issues in the Transfer and Use of STI	Steve Ballard et al.	PB 87-142 915 PB 87-142 923	NSF	Concluded that the appropriate Federal role in STI transfer included the creation of information useful to the private sector, the promotion of partnerships between the Federal Government and private industry, and the development of policies that promote long-term R&D strategies in industry
413	1986	P.L. 99-502: Federal Technology Transfer Act of 1986		100 Stat. 1785		Amended the Stevenson-Wydler Innovation Act of 1980; permitted the director of any government-owned Federal laboratory to enter into cooperative R&D agreements on behalf of that agency; established the Federal Laboratory Consortium for Technology Transfer, stated that technology transfer was a responsibility of each laboratory engineer and scientist; and assigned certain technology transfer functions to the Secretary of Commerce

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414	1986	P.L. 99-508: Electronic Communications Privacy Act of 1986		100 Stat. 1848		Addressed, generally, the unlawful interception, use, or disclosure of electronic communications
415	1986	Intellectual Property Rights in an Age of Electronics and Information	Linda Garcia, OTA	PB 87-100 301 OTA-CIT-302	House Committee on Courts, Civil, Liberties, and Administration of Justice; Senate Subcommittee on Patents, Trademarks, and Copyrights	Examined the impact of recent and anticipated advances in communication and information technologies on the intellectual property system; called attention to need for revision of policies to cope with electronic STI; and suggested principles on which to base new policy
416	1986	Federal Government Information Technology: Management, Security, and Congressional Oversight	Fred Wood	Y3. T22/2:2 F31/2 OTA CIT-297	OTA	Addressed five major areas: (1) management of information technology, including strategic planning, innovation, procurement, and the IRM concept; (2) information systems security and computer crime; (3) information technology and decision support; (4) management of government information dissemination; and (5) opportunities for using information technology in conducting congressional oversight
417	1987	Federal Information Policies in the 1980s: Conflicts and Issues	Peter Hernon and Charles R. McClure	ISBN 0-89391-382-0		Examined conflicting interests among various stakeholders in developing U.S. information policy, reviewed and analyzed existing legislation and regulations on Federal information policies, identified and discussed specific information policy issues, and offered recommendations for developing more effective Federal information policy
418	1987	"Controlling Unclassified Scientific and Technical Information," Information Management Review 2:4 (Spring 1987): 49-60	Walter R. Blados			Discussed DoD policy and procedures to prevent the undesirable transfer of production, engineering, logistical, scientific, and technical information; contained full text of DoD Directive 5230.25, "Withholding of Unclassified Technical Data from Public Disclosure"

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419	1987	"Historical Note: Shining Palaces, Shifting Sands: National Information Systems," Journal of the American Society for Information Science 38:5 (September 1987): 321-335	Harold Wooster			Contained a list and partial analysis of varied reports and studies concerned with the development of a national information system; also includes in an appendix the involvement of the Federal Government with STI since the Patent Act of 1709
420	1987	Monitoring Foreign Science and Technology for Enhanced International Competitiveness: Defining U.S. Needs	E. Bruce Peters, ed. International Sociotechnical Systems	NSF 87-32 OCLC 16769949	ONR; NSF	Contained the results of a workshop designed to "identify ways in which monitoring science and technology abroad could advance the nation's competitiveness;" put forth the following strategies: improve dissemination of specialized information such as new products reports or analyses of research fields; encourage dissemination online; target products toward end-users rather than intermediaries such as librarians; disseminate trip reports; utilize the Japanese "Old Boy" network to gain access to foreign R&D facilities; encourage panel discussions reporting on science and technology at U.S. scientific meetings; establish directories or bulletin boards of the visits of U.S. scientists abroad; and encourage U.S. scientific visitors abroad to report in publications
421	1987	P.L. 100-235: Computer Security Act of 1987		101 Stat. 1724		Directed NBS, rather than the National Security Agency (NSA), to establish computer standards program for Federal computer systems, including guidelines for the security of such systems
422	1987	The Role of Science and Technology in Competitiveness (House hearings)		Y4. Sci 2:100/22 OCLC 16852525	House Committee on Science, Space, and Technology; Subcommittee on Science, Research, and Technology	Examined legislative proposals to strengthen the technological capabilities of U.S. industry to improve international economic competitiveness

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423	1987	Intellectual Property Rights in an Electronic Age: Proceedings of the Library of Congress Network Advisory Committee Meeting (Network Planning Paper No. 16)		ED 300 014	LC	Presented the proceedings of a conference on the issues of intellectual property rights in a technology-driven environment; introduction summarized the conference presentations and discussions; provided copies of the five presentations (1) 'The OTA Report on Intellectual Property Rights' which provides a general overview of the 1986 OTA report; (2) 'The End Of Copyright' provided a legal overview of the OTA report; (3) 'The New Technologies' presented the position of the appropriate U.S. Congressional Subcommittee on intellectual property rights; (4) 'Current Bibliographic Database Ownership Issues' presented a librarian's view of these issues; and (5) 'ACS Journals Online: Is It Being Downloaded, Do We Care' presented real-life property rights situations in the private sector with possible solutions
424	1987	National Technology Center: A National Public Service Report	N.P. Vlannes et al.	PB 87-174 728	Vlannes Associates, Inc.	Proposed a National Technology Center as a new "national library" to support those disciplines not served specifically by an existing national library, and to serve as a focal point for public access to Federal STI; center would incorporate NTIS
425	1987	The Role of Science and Technology in Economic Competitiveness: Executive Summary Final Summary	Marianne Clarke, National Governor's Association and the Conference Board	OCLC 16889362 OCLC 16889351	NSF	Resulted from a Conference Board project to solicit views of U.S. governors, senior executives, and presidents and deans of U.S. colleges and universities" on the relationship of U.S. competitiveness to the human resource base and research and development capacity;" focused on the ability of the U.S. to compete, transfer technology, and transform research results into new products and services
426	1987	Balancing the National Interest: U.S. National Security Export Controls and Global Economic Competition (the Allen Report)	COSEPUP; Panel on the Impact of National Security Controls on International Technology Transfer	PB 88-170 899 ISBN 0-309-03738-7	NAS, NAE, IOM	Examined current system of U.S. and multilateral national security export controls and made recommendations designed to achieve a desirable balance among national security, economic vitality, and scientific progress

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427	1987	Technology and U.S. Government Information Policies: Catalysts for New Partnerships Report of the Task Force on Government Information in Electronic Format	Task Force on Government Information in Electronic Format; D. Kaye Gapen, Chairman	ED-288 555	Association of Research Libraries (ARL)	Represented an effort to develop a framework for understanding--philosophically, functionally, and fiscally--the patterns that exist for government information today, and the shifts in those patterns resulting from the introduction of government information in electronic formats; identified four questions considered by government agencies and libraries when decisions are made about how to provide the public with government information in electronic format; pointed to the need for a clearer picture of how government responsibilities for public availability of government information in electronic formats might be fulfilled in partnership with the private sector without the loss of the characteristics that make this information distinctive: the absence of restrictions on use, including, for basic government information, absence of a fee
428	1987	E.O. 12591: Facilitating Access to Science and Technology [Amended by E.O. 12618: Uniform Treatment of Federally Funded Inventions December 22, 1987--3 CFR 262]		52 FR 13414	President Reagan	Designed to encourage and facilitate collaboration among Federal laboratories, state and local governments, universities, and the private sector, particularly small business, to assist in the transfer of technology to the marketplace; delegated authority to Federal laboratories to enter into R&D agreements and to license of intellectual property
429	1987	Hearing on the Privatization of the National Technical Information Service, and H.R. 812, the National Quality Improvement Award Act of 1987. (House hearings)		Y4. Sci 2:100/5	House Committee on Science, Space and Technology; Subcommittee on Science Research and Technology	First Congressional hearing on NTIS privatization; testimony on the benefits and dangers of turning over one of the government's major STI dissemination mechanisms to the private sector
430	1987	An Agenda for a Study of U.S. Technology Policy (Committee Print)		Y4. Sci 2: 100/A	Committee on Science, Space, and Technology; Technology Policy Task Force	Included an agenda for studying technology policy; includes study objectives and scope, issues for consideration, and the case studies to be used to examine various industrial sectors

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431	1987	Japanese Technical Information: Opportunities to Improve U.S. Access	Christopher T. Hill, CRS		CRS	Concluded that the problem of effective access to Japanese technical information was not so much that the Japanese were unwilling to share such information with Americans, but rather that Americans were neither willing nor prepared to take the actions needed to seek out that information and make it available to its engineers and scientists in a timely and effective manner; that there were numerous reasons for lack of such activity (much of it attributed to the Not Invented Here syndrome); and that relatively few American scientists or engineers were capable of reading Japanese
432	1987	Research and Development Strategy for High Performance Computing		PB 89-120 778	OSTP	Contained findings and recommendations concerning the status and directions of high-performance computing and its relationship to Federal R&D; stressed need for academic, industry, government collaboration to keep U.S. at forefront of advanced information technology industry
433	1987	Defending Secrets, Sharing Data: New Locks and Keys for Electronic Information	Charles Wilk	Y3. T22/2:2 D36 PB 88 143 185 OTA CIT-310	OTA	Recognized increasing use of sophisticated communications and computer technology by government, private sector organizations, and citizens to store, process, and transmit information; reviewed activities and motivations of key stakeholders and focused on issues stemming from conflicts in policy goals
434	1987	Scientific and Technical Information: Policy and Organization in the Federal Government (H.R. 2159 and H.R. 1615) (House hearings)		Y4. Sci 2:100/36	House Committee on Science, Space and Technology; Subcommittee on Science, Research, and Technology	Discussed policy options open to Congress for governing the collection and dissemination of STI, including establishing a National Technical Information Corporation as a wholly-owned government corporation under the Secretary of Commerce, and a Government Information Agency to collect and distribute results of Federal R&D

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435	1987	Energy Technology Data Exchange (ETDE) established			DoE/OSTI	Established by the International Energy Agency and managed by DoE/OSTI; created to support the electronic exchange of energy-related STI among participating countries; represented attempt by DoE to increase exchange of international STI to research organizations, academia, and libraries
436	1987	OMB Notice of Policy Guidance on Electronic Collection of Information		52 FR 29454		OMB solicited public comment in the development of policy guidance concerning the electronic collection of information; proposed policy required agencies to certify that they have considered use of electronic information collection techniques as a means to reduce burden on respondents and costs to the government
437	1987	E.O. 12607: President's Commission on Privatization (the Linowes Commission)	David F. Linowes, Chairman	52 FR 34190	President Reagan	Established the President's Commission on Privatization to "review the appropriate division of responsibilities between the Federal Government and the private sector," and to identify those government programs that are not properly the responsibility of the Federal Government or that can be performed more efficiently by the private sector
438	1987	The Federal High Performance Computing Programs (Includes "A Research and Development Strategy for High Performance Computing")	FCCSET	OCLC 20398608	OSTP	Included a five-year strategy for federally-supported R&D on high performance computing; also included a detailed program plan
439	1987	Technology Policy Task Force Hearing Summary: Review of Previous Studies	Steinar Dole	Y4.Sci 2:100/E	House Committee on Science, Space, and Technology; Technology Policy Task Force	Reviewed previous studies dealing with the full spectra of issues on U.S. competitiveness and concluded that the economic climate, government policies, the American educational system and a decline in manufacturing research and technology are responsible for the gap between research, technology development, and commercialization

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440	1987	OMB Bulletin No. 87-14: "Report and Inventory of Government Information Dissemination Products and Services"		Pr Ex 2.3:87:14		Provided instructions and materials for submitting a "Report on Government Information Dissemination Products and Services," and for establishing and submitting a comprehensive inventory of such products and services; declared that "agencies shall establish and maintain (in electronic format) comprehensive inventories of all their information dissemination products and services; each product or service shall be justified in terms of the direct support of agency mission, practical utility, and cost-effectiveness, as determined by the Director of OMB; furthermore, agencies shall avoid offering information products and services that essentially duplicate services already available from other agencies or the private sector"
441	1987	Management of Technology: The Hidden Competitive Advantage (See Research on the Management of Technology: Unleashing the Hidden Competitive Advantage.)		PB 87-187092 PB 91-184085	NSF	Attempted to characterize the field of management of technology (MOT) and assess its current status in U.S. industry and acadame, the scope of current research and education in the field, and the needs of industry; included an outline and a plan by which MOT can grow
442	1988	E.O. 12637: Productivity Improvement Program for the Federal Government		53 FR 15349	President Reagan	Established a government-wide program to improve the quality, timeliness, and efficiency of services provided by the Federal government, the goal of which was to improve the quality and timeliness of service to the public and to achieve an annual average productivity increase of 3 percent in appropriate functions; included certain aspects of Federal STI programs

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443	1988	E.O. 12661: Implementing the Omnibus Trade and Competitiveness Act of 1988 and Related International Trade Matters		54 FR 779	President Reagan	Section 3-401 established a National Commission on Superconductivity to consider major policy issues regarding the U.S. application of recent advances in superconductivity
444	1988	OMB Circular No. A-132 "Federal Productivity and Quality Improvement in Service Delivery"				Provides guidelines for the development and implementation of a productivity and quality improvement process in the Executive departments and agencies; the overall goal was to promote the timely delivery of high quality cost effective products and services to the public; the objectives were to implement quality and productivity management practices in every Federal agency and make continuous, incremental improvements in quality, timeliness and efficiency of services
445	1988	Compilation of Public Laws Reported by the Committee on Science, Space, and Technology, 1958-1988		Y4.Sci 2:100/S/V.1-2	House Committee on Science, Space, and Technology	Contained a compilation of all the public laws reported by this Committee since its inception as the Select Committee on Astronautics and Space Exploration in 1958; complete through the 100th Congress and included a chart that cites the bills considered by the Committee which were enacted as public laws, and the U.S. Code citations to the public law
446	1988	Toward a National Research Network	Commission on Physical Sciences, Mathematics, and Resources, NRC	PB 89-198 709	NSF	Concluded that the U.S. would benefit significantly from the creation of a national research network; delineated major issues and technical considerations associated with implementing the proposed network; made recommendations related to funding and management

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447	1988	Government Information Controls: Implications for Scholarship, Science and Technology (Also printed in Technology Review, 91:3 (April 1988): 63-73	John Shattuck and Muriel Morisey Spence		Available from the Association of American Universities (AAU)	Concluded that government policies over the past decade had a negative impact on the flow of STI and that the new Administration should reform Federal information policy
448	1988	P.L. 100-418: Omnibus Trade and Competitiveness Act of 1988 (See Title V, Technology Competitiveness Act)		102 Stat. 1107		Renamed the NBS as the National Institute of Standards and Technology (NIST); created regional centers for the transfer of manufacturing technology; established the national critical materials council and the competitiveness policy council; prohibited NTIS privatization and required the Secretary of Commerce to report recommendations to Congress regarding NTIS modernization
449	1988	Informing the Nation: Federal Information Dissemination in an Electronic Age	Fred Wood, OTA	Y3. T22/2:2 In 3/9 PB 89-114 243 OTA-CIT-396	Congressional Joint Committee on Printing (JCP)	Noted suitability of electronic storage and dissemination for STI and other kinds of government data; highlighted problems of maintaining equitable access and appropriate roles for all stakeholders; outlined strategies for GPO, Depository Library Program (DLP), and NTIS
450	1988	P.L. 100-519: National Institute of Standards and Technology Authorization Act for FY 89; National Technical Information Act of 1988		102 Stat. 2589		Among its provisions established the positions of Under Secretary of Commerce for Technology; changed the Title of the Assistant Secretary for Products, Technology, and Innovation to Assistant Secretary for Technology Policy; and converted NTIS into a government corporation called the National Technical Information Corporation (NTIC); prohibited the privatization of the Research Information Center of NBS (library) and contained language stating that the Congress "remains unalterably opposed to contracting out NTIS or major functions or activities of the agency"

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451	1988	P.L. 100-607: Health Omnibus Programs Extension Act		102 Stat. 3048		Established the National Center for Biotechnology Information at NLM to develop computer-based methods for storing the enormous amounts of data generated by research into molecular genetics and the NIH Human Genome Project
452	1988	Survey of International Trends in Government Information Dissemination	Thomas B. Riley, Riley Information Services, Toronto, Canada	PB 89-114 607	OTA	Provided information on current information policies in various countries, methods of government information dissemination, the development of electronic information practices, and comparative trends to the U.S.
453	1988	Privatization: Toward More Effective Government, Report of the President's Commission on Privatization (the Linowes Commission)	David F. Linowes, Chairman	Pr 40.8 P 92/R 29 OCLC 20524953	President Reagan	Presented 78 specific recommendations for the transfer to the private sector of various Federal programs and services; privatization of NTIS was not recommended
454	1988	Why Federal Research and Development Fails	John F. Adearne, Resources for Future			Examined the history of Federal R&D funding, with particular emphasis on energy projects and isolated some of the major flaws in major projects; suggested an improved approach built around sound programs, competent management, and stable funding
455	1988	Science and Technology: Advice to the President, Congress, and Judiciary	William T. Golden, ed.	ISBN 0-08-036126-7		Provided a compendium of facts and opinions on U.S. science and science policy including 85 essays written around the question "What organizational structure should be utilized by the three branches of government to utilize, evaluate, and respond to science and science policy?"
456	1988	Information and Competitiveness: The Role of the Open Exchange of Information for Scientific Development and the Growth of New Industries (Senate hearings 100-1064; Serial No. J-100-54)		Y1. J89/2: S. hrg. 100-2064	Senate Committee on the Judiciary; Subcommittee on Technology and the Law	Concluded that information policy must depend on the open exchange of STI and that the proposed restrictions on unclassified STI might restrict the ability of America's engineers and scientists to compete in world markets

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457	1988	Analysis of the Office of Science and Technology Policy	G.J. Knezo, SPRD, CRS	88-205 SPR	House Committee on Science, Space, and Technology; Subcommittee on Science, Research, and Technology	Assessed the activities and effectiveness of the White House science advisory mechanism and identified continuing issues of possible legislative concern; deals with issues such as long-range planning, interagency coordination, OSTP's impact on Federal R&D budgets, proposals to elevate the status of OSTP and its Director, and the adequacy of OSTP's organization and budget
458	1988	Government Innovation Policy: Design, Implementation, Evaluation	J. David Roessner	ISBN 0-312-34134-2		Explored the relationships between government action, technological innovation, and economic performance; concluded that while we know something about the overall effects of government policies on industrial performance and industrial innovation, we know little about how to evaluate specific innovation-related programs and policies, or how to translate the funding of existing studies into prescriptions for government action
459	1988	Technology Transfer: A Policy Model	Philip A. Roberts, National Defense University	D 5.413:T22		Argued that the real issue for the U.S. is not technology transfer itself, but the lack of a comprehensive U.S. national policy to guide such exchanges; proposed a fine-tuned national policy so that technical information could be made available where and when it will do the most good in a way that would take advantage of our open society and certain other characteristics of the American people
460	1988	Computer Networks and High Performance Computing (Senate hearings)		Y4. C 73/7: S. hrg. 100-947	Senate Committee on Commerce, Science, and Transportation; Subcommittee on Science, Technology, and Space	Examined a proposal to network high-performance computers (supercomputers) and existing smaller computers into a National Research Network to enhance information exchanges among and research capabilities of academic researchers, industry, and Federal scientific facilities

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461	1988	P.L. 100-697: National Superconductivity and Competitiveness Act of 1988		102 Stat. 4613		Required the director of OSTP to establish a 5-year national action plan, the Secretary of DoE to conduct a superconductivity R&D program, the NIST to promote fundamental research and material standards, the NSF to promote basic research, and NASA and DoD to promote the commercial application of superconductivity; required all Federal agencies to conduct technology transfer activities to promote superconductivity
462	1989	"The U.S. Commercial Aircraft Industry and Its Foreign Competition" [Working Paper] (See also "The Commercial-Aircraft Industry Study," Appendix C in Made in America: Regaining the Productive Edge by Michael L. Dertouzos et al.)	Armetics March	ISBN 0-262-04100-6	MIT, MIT Commission on Industrial Productivity	Reported on the U.S. commercial aircraft industry and its foreign competitors; provided a historical overview of aviation since 1945, the development of foreign competition, the changing environment, and what the U.S. commercial aircraft industry would have to do compete in this environment
463	1989	A History of Information Science: 1945 - 1985	Dorothy B. Lilley and Ronald W. Trice	ISBN 0-12-450060-9		Presented an historical overview of the development of information science; included a chronology of selected advances and events
464	1989	High Performance Computing (House hearings No. 64)		Y4. Sci 2:101/64	House Committee on Science, Space, and Technology; Subcommittee on Science, Research and Technology	Concluded that high-performance computing is critical to the American science and technology effort and that the Federal Government has a crucial role in maintaining American leadership in computing and networking; this hearing was to review the implementation plan for the administration's high-performance computing program

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465	1989	E.O. 12675: Establishing the National Space Council		54 FR 17691	President Bush	Established a national space council to promote a coordinated process for developing a national space policy strategy and for monitoring its implementation
466	1989	Quality and Uses of Federal Information (Senate hearings 101-84)		Y4. G 74/9: S. hrg. 101-84	Senate Committee on Governmental Affairs; Subcommittee on Government Information and Regulation	Examined issues involved in Federal Government collection and maintenance of information and statistics, including economic statistics
467	1989	OMB Advance Notice of Further Policy Development on Dissemination of Information		54 FR 214		OMB solicited public comment in the development of policy concerning the dissemination of information by executive branch agencies; the proposed policy, which supplemented guidance found in OMB Circular No. A-130 and incorporated OMB Circular No. A-3, covered selected aspects of information dissemination including electronic dissemination of information
468	1989	OMB Second Advance Notice of Further Policy Development on Dissemination of Information		54 FR 25554		OMB solicited further public comment in the development of policy concerning the dissemination of information by executive branch agencies; this notice summarized public comments received to OMB's notice of January 4, 1989, regarding proposed changes to OMB Circular No. A-130, Management of Federal Information Resources; presented OMB reactions to the comments; stated preliminary conclusions; and requested further comment

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469	1989	The Federal High Performance Computing Program	FCCSET	OCLC 20398608	OSTP	Included the program plan for the Federal high computing plan that called for a coordinated effort to accelerate the rate at which high performance computing can be developed, commercialized, and applied to problems of national significance
470	1989	Federal Scientific and Technical Information Policy (House hearings)		Y4. Sci 2:101/63	House Committee on Science, Space, and Technology; Subcommittee on Science, Research, and Technology	Examined collection and dissemination of STI by the Federal Government; reviewed 2 surveys; 1 by GAO that evaluated OMB and the second by OTA to study further use of STI
471	1989	Federal Information Dissemination Policies and Practices (House hearings)		Y4. G 74/7: In 3/22	House Committee on Government Operations; Subcommittee on Government Information, Justice, and Agriculture	Conducted a comprehensive review of issues, problems and activities affecting the public availability of Government information; the hearings also identified problems and solutions for information dissemination in electronic formats
472	1989	National Science and Technology Policy (Senate hearings 101-580)		Y4. C 73/7: S. hrg. 101-580	Senate Committee on Commerce, Science, and Transportation; Subcommittee on Science, Technology, and Space	Examined the status of and need for changes in Federal science and technology policies and R&D programs
473	1989	P.L. 101-189: National Competitiveness Technology Transfer Act of 1989 [part of Title 31, part C of National Defense Authorization Act for FY 90 - FY 91 (103 Stat. 1352)]		103 Stat. 1674		Amended Stevenson-Wydler Technology Innovation Act of 1980; designed to establish a technology transfer process and model and to encourage collaboration among universities, the public and private sector, and government laboratories
474	1989	"The U.S. Commercial Aircraft Industry" Chapter 7 in Technology and the Pursuit of Economic Growth	David Mowery and Nathan Rosenberg	ISBN 0-521-38033-2		Reviewed and analyzed the development of the U.S. commercial aircraft industry with particular focus placed on the role of Federal policy

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475	1989	Security Classification of Information: Volume 1--Introduction, History, and Adverse Impacts	Arvin S. Quist	DE 9000753	DoE	Described the need for the classification of information by the Federal Government; traced the history of information security classification in the U.S. from colonial times to WWII, the Atomic Energy Acts of 1946 and 1954, and the various executive orders through the Reagan administration in considerable detail
476	1989	High Performance Computing and Networking for Science: Background Paper		Y3. T22/2: P41 PB 90-131 228	OTA	Emphasized the critical need for coordinated Federal action to create an advanced information technology infrastructure to support U.S. research, engineering, and education; described major issues and problems and the status of high-performance computing and research networks
477	1989	Information Technology and the Conduct of Research: The User's View	COSEPUP, Panel on Information Technology and the Conduct of Research	ISBN 0-309-03888-X PB 89-166 656	NAS	Provided evidence that computer and communications technologies supporting STI had changed the conduct of scientific, engineering, and clinical research; explored institutional, educational, and behavioral factors that had resulted in the current existence of a wide range of user capabilities; called for a "users' board" within NRC
478	1989	DoD Gateway Information System becomes operational			DTIC	DoD Gateway Information System (DGIS) permitted concurrent access to multiple, geographically-dispersed databases and then to post processing of results into a single output
479	1989	United States Government Information Policies: Views and Perspectives	Charles R. McClure, Peter Hernon, and Harold C. Relyea	ISBN 0-89391-563-7		Provided a range of views and perspectives on selected information policy areas specific to U.S. Government information policy
480	1989	The Federal High Performance Computing Program Network		PB 90-159 823	OSTP	Outlined R&D plan for supercomputer hardware, software, and supporting infrastructure; called for federally coordinated government, industry, and university collaboration; proposed a plan similar to S. 2918, H.R. 3131

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481	1989	Federal Scientific and Technical Information in the Electronic Age: Opportunities and Challenges	Fred Wood, OTA	PB 90-114 414 PB 90-150 780	OTA	Identified unique problems associated with the dissemination of STI; reviewed current and potential use of information technologies for improving the effectiveness and efficiency of agency STI dissemination; made recommendations for facilitating public access to STI and for improving interagency STI coordination and leadership
482	1989	United States Scientific and Technical Information Policies: Views and Perspectives	Charles R. McClure and Peter Hernon	ISBN 0-89391-571-8		Identified key issues related to the management of Federal STI, described selected STI policy activities, and offered recommendations and possible strategies by which Federal STI could be better managed and more effectively contribute to the national competitiveness of the U.S.
483	1989	National Issues in Science and Technology	NAS/NAE/IOM	OCLC 19587134	President Bush and the President's Committee on the Budget	Contained 5 "White Papers" on important topics to which science and technology issues were central; 2 papers were particularly noteworthy--"Toward a New Era in Space: Realigning Policies to New Realities" and "Science and Technology Advice in the White House"
484	1989/ 1990	Computers and Intellectual Property (House Hearings Nov. 8, 1989 and March 7, 1990)		Y4.J89/1:01/119 OCLC 23173896	House Committee on the Judiciary, Subcommittee on Courts, Intellectual Property and the Administration of Justice	Documented 5 months of hearings and discussions on computers and intellectual property; included background on copyright protection and computer software; concluded that Congress must move cautiously but decisively in this area
485	1990	Helping America Compete: The Role of Federal Scientific and Technical Information	Fred Wood OTA	Y3. T22/2:2 Am 3/2 OTA-CIT-454	House Committee on Science, Space, and Technology	Concluded that the U.S. must make better use of its STI resources if it wished to be competitive in world markets and maintain its leadership; assessed how Federal STI could contribute to a more competitive America, and what actions were needed to realize this potential

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486	1990	Foreign Technology: U.S. Monitoring and Dissemination of the Results of Foreign Research	GAO	PB 90-239 294 GAO/NSIAD-90-117	Joint Economic Committee; Subcommittee on Technology and National Security	GAO identified 62 federal civilian and military agency offices and divisions that monitor foreign technology; there is no central source identifying all monitoring activity, and coordination among monitoring agencies is limited; this creates the potential both for duplication of monitoring efforts and gaps in monitoring coverage
487	1990	Analyzing the Costs of Federal Research	Harvey A. Averch	PB 91-166 629	OTA	Described procedures for assessing three different modes of research: (1) basic research; (2) innovation research, aimed at developing new or improved products, services, or processes; and (3) applied research, aimed at research informing or affecting public decisions; also described best practice for evaluating science education and manpower training programs
488	1990	American Science Policy Since World War II	Bruce L.R. Smith, Brookings Institute	ISBN 0-8157-7998-4		Described how the U.S. reached a consensus on science policy after WWII and how that consensus broke after the Viet Nam War; describes 3 phases of U.S. science policy and provided guidance for future policy direction
489	1990	Rhetorical Analysis of Science Policy Literature, 1960-1990	D.S. Birdsell H.W. Simons	PB 91-166637	OTA	Provided a rhetorical analysis of scientific policy literature from 1960 - 1990; presented the ideology on arguments for funding basic science and chartered official pronouncements of key political figures
490	1990	Organizing for Environment, Energy, and the Economy in the Executive Branch of the U.S. Government	Carnegie Commission on Science, Technology, Government	OCLC 21496047	NSF	Concluded that the U.S. needed basic changes in the institutional, as well as legal, arena to minimize conflict between goals for environmental quality, energy security, and economic strength; to promote cooperation between proponents of environmental quality and advocates of economic development; and to address emerging environmental issues, especially those on a global scale

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491	1990	The U.S. Technology Policy [See Lewis M. Branscomb "Toward a U.S. Technology Policy" Issues in Science and Technology 7:4 (Summer 1991): 50-55.]	OSTP		President Bush	Outlined the Bush administration's technology policy, the issues, goals, and strategies; stated that the goal of U.S. technology policy was to make the best use of technology in achieving the national goals of improved quality of life, continued economic growth, and national security; stated that an efficient technological infrastructure, especially in the transfer of information, was essential, but did not include a strategy for transferring information as part of the overall policy statement
492	1990	International Science and Technology and Foreign Policy (House hearings 101-164)		Y4. Sci 2:101/64	House Committee on Science, Space, and Technology; Subcommittee on International Cooperation	Contained expert testimony related to Title V of P.L. 95-426 implemented to elevate S&T as an element of U.S. foreign policy; raised concerns with restricting U.S. S&T because of rising trade deficits and lagging industrial competitiveness
493	1990	National Science and Technology Issues (Senate hearings 101-1046)		Y4. C 73/7: S. hrg. 101-1046	Senate Committee on Commerce, Science, and Transportation	Contained the testimony of the director of NSF on the role of NSF in today's changing environment; discussed the changing global economy, and the relative importance of the generation, access, and rapid deployment of new knowledge and information
494	1990	Patent Competitiveness and Technological Innovation Act of 1990 (House report 101-960, part 1) [Report together with additional views (to accompany H.R. 5598), was referred jointly to Judiciary and Committee on Science and Space Technology]		Y1.1/8:101-960/ pt. 1	House Committee on the Judiciary	Proposed changes/improvements to the patent law in five areas: space; transgenic animals; patent remedy; research, experimentation, and competitiveness; and contractor invention rights

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495	1990	Trade and Technology Promotion Act (House hearings, 101-913)		Y4. G 74/9: S. hrg. 101-913	Senate Committee on Governmental Affairs	Proposed "to establish as an executive department of the government a Department of Industry and Technology, to establish within such a department the Advanced Civilian Technology Agency; to add the Secretaries of the Treasury and Industry and Technology and the United States Trade Representative to the National Security Council, and for other purposes"
496	1990	Transfer of Technology from the Federal Laboratories (House hearings)		Y4. Sci 2: 101/130	House Committee on Science, Research, and Technology; Subcommittee on Science, Research, and Technology	Explored "the extent to which our Federal agencies and laboratories are in compliance with the Federal Technology Transfer Act of 1986, Public Law 99-502, and the Executive Order 12591, of April 10, 1987, which was based on the Act"
497	1990	High-Performance Computing Act of 1990 (Senate report 101-387) [Note: P.L. 102-194: The High Performance Computing Act of 1991 established the National Research and Education Network (NREN)]		Y1.1/5: 101-387	Senate Committee on Commerce, Science, and Transportation	Recommended passage, with an amendment in the nature of a substitute, of S. 1067, the High-performance Computing Act of 1990, to amend the National Science and Technology Policy, Organization, and Priorities Act of 1976 to accelerate Federal R&D efforts to develop high performance computers (supercomputers) and related software and networks
498	1990	National High-Performance Computing Technology Act [House hearings No. 115) H.R. 3131; passed and signed into law as the High Performance Computing Act of 1991]		Y4. Sci 2: 101/115	House Committee on Science, Space, and Technology; Subcommittee on Science, Research and Technology	Contained testimony supporting H.R. 3131; described how the generation, storage, and transmission of information had been revolutionized by computers and the importance of high performance computing to competitiveness, global change, and education
499	1990	Copyright Protection for Intellectual Property to Enhance Technology Transfer (House hearings No. 117)		Y4. Sci 2: 101/117	House Committee on Science, Space, and Technology; Subcommittee on Science, Research and Technology	Examined "the effect of the ban on Federal copyrights on the transfer of technology to the private sector"

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500	1990	American Technology Preeminence Act (House hearings No. 101-481, part 1) [Report to accompany H.R. 4329]		Y1.1/8: 101-481/ pt. 1	House Committee on Science, Space, and Technology	H.R. 4329 had 3 major purposes: 1) to make legislative changes including antitrust reform, and to establish a definition of a U.S. business to increase incentives for the creation of jobs within the U.S. and to remove legislative barriers to effective U.S. participation in world markets; 2) to pave the way for further-reaching changes including cost of capital and government procurement; and 3) to strengthen the Technology Administration of the DoC to provide for more effective government participation in the solution to maintaining U.S. preeminence in technology
501	1990	Making Things Better: Competing in Manufacturing	Julie Gorte OTA	Y3. T22/2: 2M28	OTA	Considered ways to promote the restoration of American leadership in manufacturing technology; some of the things that most needed doing were up to industry--especially in handling people, from managers to engineers to shopfloor workers, and in forming stable, productive relationships among different segments of an industry complex; Government also had a critical role to play; the first essential was to create an economic environment that supports manufacturing and encourage long-term investment in technology;" recommended a higher national savings rate, a lower Federal deficit, and collaboration with industry on R&D projects
502	1990	Excellence in Mathematics, Science, and Engineering Act of 1990 (Senate hearings 101-985)		Y4. L11/4: S. hrg. 101-985	Senate Committee on Labor and Human Resources; Subcommittee on Labor, Health, and Human Services, Education, and Related Agencies of the Committee on Appropriations	To promote excellence in American mathematics, science, and engineering education; enhance the scientific and technical literacy of the American public; stimulate the professional development of scientists and engineers; provide for education, training, and retraining of the nation's technologists; increase the participation of women and minorities in careers in mathematics, science, and engineering, and for other purposes

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503	1990	Worker Training: Competing in the New International Economy		Y3.T 22/2-2 W89 OCLC 22610148 OTA-ITE-458	OTA	Concluded that workers' skills are critical to U.S. industrial productivity and competitiveness and to maintaining living standards, that most American are not well trained, and that more and better information is needed to train U.S. workers before they can become part of any competitive strategy
504	1990	The Process of Technological Innovation	Louis G. Tornatzky Mitchell Fleischer	ISBN 0-669-20348-3	NSF	Examined the various factors associated with technological innovation; details the importance of technological innovation, the creation and dissemination of technology, and the adoption and implementation of technological innovation
505	1990	Critical Connections: Communication for the Future	Linda Garcia OTA	Y3. T22/2:2 C 73/13 OTA-CIT-407	House Committee on Energy and Commerce	Concluded that the U.S. communication infrastructure was changing rapidly as a result of technological advances, deregulation, and an economic climate that was increasingly competitive; this change was affecting the way in which information was created, processed, transferred, and provided to individuals and institutions; while new technologies have the potential to effectively meet the needs of an information-based society, they would undoubtedly generate a number of significant social problems; in some areas they would create opportunities; in others, they might constrain activities; how these technologies evolve and were applied--as well as who would reap their benefits and bear their costs--would depend on decisions being made in both the public and private sectors
506	1990	P.L. 101-650: The Computer Software Rental Amendments Act of 1990		104 Stat. 5134		Granted owners of copyright in computer programs an exclusive right to control public distribution of the program in the nature of rental, lease, or lending; an exception to the law allowed lending by nonprofit libraries for nonprofit purposes without the permission of the copyright owner, but required libraries to affix a warning of copyright to the package containing the computer program

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507	1990	Computer Software and Intellectual Property	Joan Winston OTA	OTA-BP-CIT-61	House Committee on the Judiciary; Subcommittee on Courts, Intellectual Property, and the Administration of Justice	Examined intellectual property protection for computer software, including copyrights, patents, and trade secrets, and provides an overview views and positions held by the various stakeholders
508	1990	Government Information Quarterly - Symposium Issue on NASA (Vol. 7, No. 2, 1990)				Dealt with NASA's informational and educational programs, including the principal mechanism for knowledge transfer--its STI Program
509	1990	What Engineers Know and How They Know It: Analytical Studies from Aeronautical History	Walter G. Vincent	ISBN 0-8018-3974-2		Used the case study approach to illustrate the nature and sources of engineering knowledge and concluded that "engineering implies a knowledge-producing activity embedded within a large problem-solving activity"
510	1990	The Matrix: Computer Networks and Conferencing System	John S. Quarterman	OCLC 19457573		Included detailed information and description of the numerous computer network and conferencing systems, worldwide; provided an overview of the technology and standards that underlie them and relevant history
511	1990	E.O. 12700: President's Council of Advisors on Science and Technology		55 FR 2219	President Bush	Established the President's Council of Advisors on Science and Technology to advise the President on matters involving all areas of science and technology
512	1990	Access and Efficiency in Reagan-Era Information Policy: A Case Study of the Attempt to Privatize the National Technical Information Service (Doctoral Dissertation)	Robert Keith Stewart	91-04302	University of Washington	Undertaken as a case study of public policy to learn about the formation of information policy at the Federal level; concluded that by the mid-1980s there was an apparent shift in the direction of Federal information resource management policy away from access toward the idea of efficiency

CHRONOLOGY OF SELECTED LITERATURE, REPORTS, POLICY INSTRUMENTS, AND SIGNIFICANT EVENTS AFFECTING FEDERAL SCIENTIFIC AND TECHNICAL INFORMATION (STI)

1945 - 1990

Appendix A: Chronology of the Defense Technical Information Center (DTIC) *

Year	Event/Report/Policy Instrument	Author	Sponsor	Major Findings, Recommendations, Significance
1945	Air Documents Division took over WWII documents		U.S. Army Air Corps (later USAF)	Air Documents Division of the Intelligence Department of HQ, Air Technical Service, at Wright Field, Dayton, OH (changed to Wright-Patterson AFB in 1948), took over some 800,000 documents from the European operation. Captured German and Japanese technical documents were added.
1947	Central Air Documents Office (CADO) established (created from Air Documents Division		U.S. Army Air Corps, Navy	Established to collect, process, and distribute scientific and technical reports, including captured foreign documents. CADO collection included a quarter of a million technical reports dating back to WWI.
1951	Armed Services Technical Information Agency (ASTIA) established by the Secretary of Defense, George C. Marshall, under policy direction of the DoD Research and Development (R&D) Board and Management Control of the Secretary of the Air Force		DoD	Established to serve all three military departments and their contractors. Absorbed CADO and Air Technical Index collection and the Navy Research Section of the Library of Congress (LC) and its Technical Information Pilot collection. Started with a collection of some 400,000 titles (received requests 40,000 documents during FY 1951). The Navy Research Section of LC remained in Washington, DC, while ASTIA headquarters remained at Wright-Patterson AFB, OH, until 1958 when the consolidated their operations and moved to Arlington Hall Station, Arlington, VA.
1952	Publication of ASTIA Document Service Center Subject Heading List	ASTIA	ASTIA	First revised headings extended which included information in all fields of sciences, research, and technology.
1953	Tri-Service regulation for the operation of ASTIA promulgated. AFR 205-43, AR 380-60, and OPNAVINST 5510.17			The three services became jointly involved in the operation and funding of ASTIA.
1953	Formation of the Title Announcement Bulletin		ASTIA	Union of information contained in the Technical Information Pilot, published by LC, and the Technical Data Digest (TDD), established in 1926 as the Technical News Service and changed to the TDD in 1932, published by ASTIA. This was the first Defense consolidated announcement publication of newly accessioned documents.
1954	Joint funding of ASTIA discontinued			ASTIA funded by the Air Research and Development Command.

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1945 - 1990

Appendix A: Chronology of the Defense Technical Information Center (DTIC)

Year	Event/Report/Policy Instrument	Author	Sponsor	Major Findings, Recommendations, Significance
1955	Introduction of the X-System collection of documents			These were documents not previously cataloged by ASTIA and no longer available elsewhere. This collection consisted of approximately 50,000 documents, of which 30,000 were not cataloged.
1957	Title Announcement Bulletin became Technical Abstract Bulletin (TAB)		ASTIA	An announcement bulletin, published twice each month, of recently accessioned technical reports.
1958	ASTIA Operational Liaison Committee established with official representatives from the Army, Navy, and Air Force			SEATO nations added to ASTIA's authorized foreign release service.
1959	Automation of ASTIA library files using IBM solid state 90 for search formulation			
1960	Thesaurus of ASTIA Descriptors		ASTIA	ASTIA's first machine-tailored vocabulary of scientific terminology.
1960	ASTIA expanded service to grantees and potential contractors of military departments		DoD	Broadened ASTIA's user community.
1960	DD 613 Management Data Summaries, provided to the military service on demand			
1961	ASTIA began to provide unclassified/unlimited reports in microfilm to the Office of Technical Services, Department of Commerce, for sale to the general public			The Office of Technical Services, Department of Commerce, was a clearinghouse for scientific and technical information where the general public could obtain all DoD unclassified/unlimited release reports it received.
1962	DoD Directive 5100.36, DoD Technical Information Program		DoD	Established the DoD Scientific and Technical Information (STINFO) Program.
1962	Tri-Service Representatives replaced the Army, Navy and Air Force ASTIA Operational Liaison Committee			
1963	DOD Instruction 5129.43, Assignment of Functions for the Defense Scientific and Technical Information Program		DoD	Established ASTIA as the DoD documentation center for scientific and technical information.

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Appendix A: Chronology of the Defense Technical Information Center (DTIC)

Year	Event/Report/Policy Instrument	Author	Sponsor	Major Findings, Recommendations, Significance
1963	DoD Instruction 5100.38, Defense Documentation Center for Scientific and Technical Information (DDC)		DoD	Expanded ASTIA's mission and renamed ASTIA as the Defense Documentation Center (DDC). Collection numbered nearly 700,000 titles and its annual requests for documents totaled more than a million.
1963	ASTIA Tri-Service Staff became the DDC Liaison Representatives			
1963	DDC became a field activity of the Defense Supply Agency (DSA) [Renamed Defense Logistics Agency (DLA) in 1976]			This change was made after 18 years of Air Force operational control.
1963	Computer resident Technical Report (TR) Bibliographic Database established, using the UNIVAC 1107 direct file batch processing for bibliographic printouts		DDC	
1964	DDC Supplement to the Thesaurus of ASTIA Descriptors (Second Edition) published		ASTIA	This first supplement listed 800 new terms.
1964	Committee on Scientific and Technical Information (COSATI) Subject Category List, AD 612 200		Federal Council for Science and Technology	Government-wide guidance needed toward standardization to provide a base upon which any activity could build a more specific terminology, a selective distribution system by subject or a right-of-access system by subject.
1965	DoD Instruction 5200.21, Certification for Access to Scientific and Technical Information		DoD	Designated DDC as the central location for registration/certification for access to the products and services of the various DoD STINFO activities.
1965	DoD Instruction 5100.38, Defense Documentation Center for Scientific and Technical Information (DDC), 29 Mar 65		DoD	Superceeded 1963 DoDI 5100.38.
1965	DoD Instruction 7720.13, Reporting of Current Research and Exploratory Development at the Work Unit Level		DoD	Established the DoD RDT&E Work Unit Data Bank.
1966	DD 1498 Work Unit Data Bank established offline		DDC	Upgrade of DD 613 Management Data Summaries.
1966	DDC's mission extended by memorandum of 17 Jan 66, DDR&E		DoD	DDC performed processing and primary distribution within the U.S. of technical reports from certain foreign countries.

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CHRONOLOGY OF SELECTED LITERATURE, REPORTS, POLICY INSTRUMENTS, AND SIGNIFICANT EVENTS AFFECTING FEDERAL SCIENTIFIC AND TECHNICAL INFORMATION (STI)

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Appendix A: Chronology of the Defense Technical Information Center (DTIC)

Year	Event/Report/Policy Instrument	Author	Sponsor	Major Findings, Recommendations, Significance
1966	Primary distribution of the Advisory Group of Aerospace Research and Development (AGARD) reports assigned to DDC by the Director of Technical Information (ODDR&E) and by the Director, DSA			Primary a well as secondary distribution of classified AGARD reports within the U.S.
1966	Conversion form DDC Division/Section method of subject categorization to the Field/Group structure of the COSATI Subject Category List-DoD Extended, AD 624 000			This was a result of new and emerging technologies and to make all DoD databases compatible by subject area; response to a need for uniformity.
1966	DDC is assigned responsibility within DoD, for activities relating to the development, coordination requirements, and the recommendations pertaining to standard data elements and data codes to be used in the DoD Thesaurus of Engineering and Scientific Terms (TEST)		DDR&E/ONR	A technical thesaurus and a comprehensive up-to-date authority for terms used to describe scientific and technical subjects.
1966	Named changed from the Thesaurus of ASTIA Descriptors to the Thesaurus of DDC Descriptors, AD A950 016		DDC	Superceeded DDC Supplement to the Thesaurus of ASTIA Descriptors (Second Edition), DDC Authorized Descriptors and Descriptor Hierarchies. New features included a hierarchal descriptor display and utilization of machine processing and computer programs for production.
1967	DDC assumed responsibility for the continued surveliance and maintenance of TEST as recommended by ONR to DDR&E			
1967	Machine-Aided Indexing (MAI) idea conceived by a DDC employee	DDC		The idea was to have the computer assign a limited number of controlled subject terms to machine-readable text. The database and terms used by the searcher would be in the natural language of the searcher.
1968	Defense RDT&E Online System (DROLS) initiated as an experimental online system		DDC	Contained the TR Bibliographic Database and the Work Unit Information System (WUIS).
1968	DDC assumed responsibility for establishing and maintaining the DoD Studies and Analyses Data Bank			
1970	The Current Awareness Bibliography (CAB) program became operational		DDC	The CAB program automatically provided bibliographies of newly accessioned technical reports based on a participant's interest profile.

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Year	Event/Report/Policy Instrument	Author	Sponsor	Major Findings, Recommendations, Significance
1970	The Automatic Magnetic Tape Dissemination (AMTD) program became operational		DDC	AMTD provided citations on a semi-monthly basis for all DDC-accessioned reports received during the preceding cycle (TAB on magnetic tape).
1970	Publication of the Referral Data Bank Directory of the Defense Documentation Center, AD 712 800		DDC	Contained descriptions of more than 180 scientific and technical information sources operated or supported by the Department of Defense or other Federal agencies.
1971	The Automatic Documentation Distribution (ADD) program became operational		DDC	The ADD program automatically provided microfiche copies of newly accessioned technical reports based on a participant's interest profile, need-to-know and distribution limitations.
1971	Recurring Reports became operational		DDC	A customized product composed of Work Units [or Independent Research and Development (IR&D) information added in 1975] based on the subject needs of the user. It could be produced on a monthly, quarterly, semiannual or annual basis.
1972	DROLS became operational with 15 classified remote terminals in operation, all DoD		DDC	Contained the Bibliographic Database, the WUIS and Program Planning Database.
1973	DDC hosted a meeting of Government agencies producing microfilms			Attention focused on technical aspects of film deterioration and lack of standards for storage of nonsilver film. Plan of action was initiated.
1973	First unclassified remote terminal connected to DROLS		DDC	Activated for training and final tests at the Metals and Ceramics Information Center, Battelle Memorial Institute, Columbus, OH.
1974	DDC Administrator appointed to AGARD Panel			DDC Administrator represented DoD as a member of the Technical Information Panel of AGARD.
1974	Name changed from the Thesaurus of DDC Descriptors to the DDC Retrieval and Indexing Terminology (DRIT), AD 773 300		DDC	DRIT was a thesaurus established for standardized posting terms. It also showed a hierarchical arrangement of vocabulary.
1975	The Independent Research and Development (IR&D) Database was added to DROLS		DDC	Proprietary information was made available to DoD and other OUSDR&E-approved government organizations which had classified dedicated access.

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Appendix A: Chronology of the Defense Technical Information Center (DTIC)

Year	Event/Report/Policy Instrument	Author	Sponsor	Major Findings, Recommendations, Significance
1977	The Shared Bibliographic Input Experiment (SBIE) was initiated		DDC	SBIE was established as an experiment to input online document descriptive records into the system from DROLS terminals at user sites.
1978	Cataloging manual was prepared for AGARD			DDC prepared a manual on descriptive cataloging for inclusion in a 12-volume documentation practices manual at the request of AGARD.
1978	DDC Administrator was appointed as U.S. Coordinator for the AGARD Technical Information Panel			
1979	DDC became the Defense Technical Information Center (DTIC) by DLA General Order 14-79		DoD	Expanded DTIC's mission in the provision of STI.
1979	DOD Instruction 5200.21, Certification Access to Scientific and Technical Information, Dec 68, was canceled and replaced by DoD Instruction 5200.21, Dissemination of DoD Technical Information, Sep 79			Provided policy and assigned responsibility for the dissemination of DoD technical information. Certification procedures for access to DoD scientific and technical information became enclosure 3. It consolidated parts of DoDI 5100.38 and supplemented DoDD 5100.36.
1979	DTIC began using Machine-Aided Indexing for technical report accessions		DTIC	This process assisted in standardizing term selections for new reports.
1980	AD Hoc Expert Group on Information Flow met			DTIC, along with the Departments of Energy (DoE), Commerce (DoC), State and Agriculture; National Aeronautics and Space Administration (NASA) and the National Science Foundation, prepared information transfer recommendations leading to a U.S. policy and position at the 1981 UN Conference on New and Renewable Sources of Energy.
1980	DTIC increased availability and ease of transfer of technical report data		DTIC	Improvements allowed descriptive data related to classified technical reports to be made available in unclassified versions, online and in paper copy.
1980	DROLS service became available through direct dial as well as Tymnet (22 users at this time)		DTIC	Allowed use of a variety of terminals that employed standard ASCII asynchronous protocol. Unclassified dial-up service and Tymnet greatly reduced communication costs for new users of DROLS.

Year	Event/Report/Policy Instrument	Author	Sponsor	Major Findings, Recommendations, Significance
1980	The Resource Sharing Advisory Group (RSAG) charter was signed by the DTIC Administrator			The group was formed to provide advice and make recommendations on matters dealing with the DTIC Shared Cataloging programs and other resource sharing activities.
1980	The Information Analysis Centers (IACs) became part of DTIC's mission		DoD	IACs were centers for the analysis of scientific and technical information in specialized subject areas.
1981	DoD Directive 5100.36, DoD Scientific and Technical Information Program, 2 Oct 81		DoD	Superseded 1965 DoDI 5100.38, Defense Documentation Center for Scientific and Technical Information (DDC). DoDD 5100.36 included the charter for DTIC's mission and responsibilities.
1981	Canadian government became first foreign government to access DROLS	DTIC		
1982	Local Automation Model (LAM) idea conceived by a DTIC employee	DTIC		An integrated library system with remote data system interface capabilities.
1982	How to Get It--A Guide to Defense-Related Information Resources, AD A110 000, was published	IDA	DTIC	A reference tool to identify sources of, or to acquire government-published or -sponsored documents, maps, patents, specifications, standards and other resources of interest to the defense community.
1983	DoD Directive 3200.12, DoD Scientific and Technical Information Program		DoD	Superseded 1981 DoDD 5100.36, DoD Scientific and Technical Information Program (STIP), and established a series of DoD publications related to the STIP.
1983	Joint Agency Data Element Dictionary was compiled			DTIC, the National Technical Information Service (NTIS), DoE, NASA, and the Government Printing Office, compiled the Joint Agency Data Element Dictionary (DED); DED contained individual data element descriptions and a consolidated index; facilitated resource sharing.
1983	DLA/DTIC assumed administrative/operational responsibility for the Manpower and Training Research Information System (MATRIS)		OUSD/RE OASD/FM&P	A management support database which contained a collection of unclassified information on people-related research (manpower and personnel, education and training, human factors engineering and simulation and training devices) sponsored by DoD.

Appendix A: Chronology of the Defense Technical Information Center (DTIC)

Year	Event/Report/Policy Instrument	Author	Sponsor	Major Findings, Recommendations, Significance
1984	Directory of DoD-Sponsored R&D Data Bases, AD B085 600, was published		DTIC	A unified reference source to R&D databases within DoD. The directory also facilitated resource sharing, networking and identification of technical experts.
1985	The Shared Bibliographic Input Experiment became operational as the Shared Bibliographic Input Network			Enabled users to input, online, their descriptive and subject cataloging data for technical reports.
1985	CENDI charter was signed by member organizations		DoC, DoE, NASA, DoD	The federal Departments of Commerce, Energy, NASA, and Defense was a group created to discuss common STI goals and procedures.
1985	DoD 3200.12-R-2, Centers for Analysis of Scientific and Technical Information, replaced and canceled DoDI 5100.45, Centers for Analysis of Scientific and Technical Information, 28 Jul 64		USDRE	Prescribed procedures to be followed by all DoD components in establishing, operating, and administering DoD IACs within the framework of the DoD STIP.
1985	Guidelines for Descriptive Cataloging of Reports, AD A160 409, published by CENDI		DTIC, NASA, NTIS, DoE	CENDI-sponsored revision of the COSATI guidelines; defined and streamlined exchange between the CENDI agencies.
1986	The Technical Reports Awareness Circular (TRAC) replaced the Technical Abstract Bulletin (TAB)		DTIC	TRAC was a monthly unclassified publication available to all DTIC users. It contained citations to the latest classified and unclassified technical reports.
1986	Subject Categorization Guide for Defense Science and Technology, AD A172 650, replaced the COSATI Subject Category List (DoD-Modified), 1965			This new publication was the result of the need for clearer lines of demarcation among emerging technologies and between theory and military-sensitive applications, along with the need to categorize the new areas of scientific and technical interest.
1986	CENDI institutionalized by a formal Memorandum of Understanding (MOU) among participants		DoC, DoE, NASA, DoD, NLM	The MOU marked the formal establishment of CENDI and the National Library of Medicine accepted their invitation to become a member.
1987	NATO Scientific and Technical Information Service (NSTIS)			DTIC, in cooperation with NATO HQ and the AGARD Technical Information Panel, sponsored a study of NATO's requirements for scientific and technical information.

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Appendix A: Chronology of the Defense Technical Information Center (DTIC)

Year	Event/Report/Policy Instrument	Author	Sponsor	Major Findings, Recommendations, Significance
1988	ANSI Standard Z39.18, Scientific and Technical Reports: Organization, Preparation and Production replaced MIL-STD 847B		ANSI	American National Standards Institute standard for formatting technical reports was adopted; military standard became obsolete.
1988	SearchMAESTRO became operational		DTIC	DTIC's menu-driven search tool designed to help DoD end-users access more than 800 commercial and government databases covering a broad range of subjects.
1988	DoD Gateway Information System (DGIS) became operational		DTIC	DGIS was a multi-faceted development project which allowed the user to automatically access heterogeneous remote sources through one access method, download information to a central node, analyze and manipulate the data and order the source documents.
1988	DTIC developed the TR Database on CD-ROM prototype		DTIC	It contained unclassified bibliographic citations with abstracts for technical reports, patent applications and conference papers accessioned from Jan 82 to Sep 88.
1989	DTIC Thesaurus selected as a basis for the NATO Thesaurus		DTIC	NATO used the DTIC Thesaurus for indexing its document collection, therefore, making NATO and DTIC compatible.
1989	DTIC hosted the DoD Scientific and Technical Information Program (STIP) Working Group			The purpose of the STIP Working Group was to examine the future of the DoD STIP in the electronic age and make recommendations for DoD-wide plans for the future.
1989	TRAC abolished at the end of CY 1989		DTIC	In order to make TRAC an unclassified publication, a subject index was not included. Lack of subject index caused a significant drop in subscriptions.
1990	DTIC provided operational management and partial funding for 14 contractor-operated IACs supporting DoD research, engineering, and logistics programs in selected subject areas			
1990	DTIC contained nearly two million scientific and technical reports in its collection			

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Appendix A: Chronology of the Defense Technical Information Center (DTIC)

Year	Event/Report/Policy Instrument	Author	Sponsor	Major Findings, Recommendations, Significance
1990	Named changed from DRIT to DTIC Thesaurus, AD A226 000		DTIC	A tool used to index and retrieve scientific and technical information from DTIC's various databases and to assist DTIC's users in their information storage and retrieval operations.
1990	Scientific and Technical Information Library System (STILAS) resulted from the LAM project			An integrated library system with special features targeted for DoD technical libraries. It searched remote databases and the local system simultaneously and was specifically designed to upload DoD technical report records to DROLS.
1990	MOU was signed establishing procedures for requests for DTIC AD-numbered documents to be submitted directly to DTIC by the governments of Australia, Canada and the United Kingdom	DoD, Military Services	DoD, Military Services	This procedure created a line of document transfer between the foreign governments and DTIC. All requests for AD-numbered documents were submitted directly to the Military Services and the Defense Intelligence Agency, through DTIC.
1990	Expanded the Report Selection Criteria to include subject-related, non-DoD-sponsored reports			
1990	Distribution to DTIC users of copyrighted material that was funded by the U.S. Federal Government			

* From:
Kramer, Anna E. Defense Technical Information Center (DTIC) "Chronology of Selected Reports, Policy Instruments, and Significant Events Affecting Federal Scientific and Technical Information (STI), 1945-1990." DTIC/TR-91/4 Sep 91, Defense Technical Information Center, Cameron Station, Alexandria, VA 22304-6145. (Available from DTIC as AD A 241 550.)

CHRONOLOGY OF SELECTED LITERATURE, REPORTS, POLICY INSTRUMENTS, AND SIGNIFICANT EVENTS AFFECTING FEDERAL SCIENTIFIC AND TECHNICAL INFORMATION (STI)

1945 - 1990

Appendix B: Chronology of the National Technical Information Service (NTIS) *

1945	June. President Truman issues E.O. 9568, establishing the Publication Board (PB).
1945	August. E.O. 9604 expands the responsibility of the PB to include enemy documents
1945	September. Secretary of Commerce issues Order #5 establishing the Office of Declassification and Technical Services, combining the National Inventors Council, the PB, and the Committee on the Release of Scientific Information (CORSI).
1946	January. The Technical Industrial Intelligence Committee (Joint Chiefs of Staff) becomes part of Publications Board.
1946	The Office of Technical Services (OTS) replaces the Office of Declassification and Technical Services.
1946	Bibliography of Scientific and Technical Reports first published by OTS.
1947	Federal Science Progress ceases publication after scientific magazine publishers complain that it represented potential competition and overlapped private publications.
1947	Congress approves only one quarter of FY 48 appropriations, approves a revolving fund.
1949	Secretary of Commerce requests Congress consider a bill to establish a clearinghouse.
1950	Congress passes Public Law 81-776 establishing a clearinghouse in the Commerce Department. Patent assistance and marketing functions transferred to Patent Office; OTS retains licensing responsibilities.
1950	Agency for International Development (AID) contracts with NTIS for response to inquiries from developing countries.
1951	NACA, AEC, and TVA are added to list of suppliers of technical documents.
1951	The Economic Cooperation Administration (ECA) contracts with OTS to handle inquiries from Marshall Plan countries; NTIS subcontracts to nine research institutions.
1951	By executive order, OTS becomes Government's sales outlet for federal technical reports.
1954	Secretary of Commerce requests opinion of Comptroller General on studies being contemplated, what costs which could be included in charges, and what charges could be made.
1955	Bibliography of Technical Reports becomes U.S. Government Research Reports.
1956	Carnegie Library of Pittsburgh, New York Public, and Georgia Institute of Technology libraries named as depositories.
1957	OTS designated as central point for exchange of non-classified information.
1958	University of Cincinnati, Detroit Public, John Crerar and Linda Hall libraries added to depository listing.
1958	Interest in scientific information increased, bringing with it an increase in NTIS' budget - from $150,000 in FY 58 to $660,000 in FY 59.
1958	P.L. 480, as amended, authorizes use of foreign currencies to finance translations. NSF asks NTIS to operate the program.
1959	Semimonthly journal lists translationsavailable from OTS and private sources.
1959	Number of OTS depository libraries reaches 10; with 8 additional ones for specifically for translations.
1960	OTS begins issuing bibliographies in particular subject areas on a subscription basis.
1962	OTS Regional Depositories receive microfilm copies of unclassified reports from Armed Services Technical Information Agency (ASTIA).
1963	ASTIA cataloging information added to NTIS.
1964	OTS, with the exception of the National Inventor's Council, transferred to the National Bureau of Standards' Institute for Applied Technology.
1964	February. Federal Council for Science and Technology recommends establishment of a Clearinghouse for Scientific and Technical Information (CFSTI).
1964	White House press release announces the establishment of the CFSTI and links being made between OTS and the Smithsonian Science Information Exchange (SSIE) and the National Referral Center (NRC) at the Library of Congress.
1964	NTIS initiates its Selected Research in Microfiche (SRIM) program.

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Appendix B: Chronology of the National Technical Information Service (NTIS)

1964	Government Reports Announcement and Index (GRA&I) begin publication.
1964	June. Agreement signed between DoD and Commerce for the Clearinghouse to handle DoD documents in the public domain. Defense Documentation Center to provide data processing services on a reimbursable basis.
1964	CFSTI provides both hardcopy and microfiche of all documents processed.
1964	Indexing for database changed to conform to COSATI Descriptive Cataloging of Government Scientific and Technical Reports.
1965	Government-wide Index to Federal Research and Development Reports issued, merging input from AEC, NASA, DoD and the CFSTI.
1965	AID general program moved out of CFSTI after 26 years of operation.
1965	Dr. Mortimer Taube, Documentation, Inc., proposed CFSTI as an independent organization.
1966	AID cooperative program again assigned to CFSTI, with emphasis on Latin America, Africa, and Middle East.
1966	Departmental Order 90-B further defines CFSTI role in documentation, information, and industry assistance.
1966	CFSTI participates in State Technical Services Act implementation.
1966	Research Associate Program established in areas of scientific and technical information.
1968	Leasco, Inc. proposes taking over CFSTI.
1968	NTIS acquires its own IBM 360/20 computer.
1970	September. CFSTI becomes NTIS.
1970	As part of the functional reorganization, the Department of Commerce's Organizational Order 30-7A transferred to NTIS full authority to establish and monitor a clearinghouse of scientific, technical, and engineering information and to assist operating units in disseminating business and statistical information
1970	Assistant Secretary for Science and Technology in Commerce recommends NTIS become a corporation.
1970	Cooperating Agencies established in developing countries to handle sales of documents under AID/NTIS project.
1972	EPA enters agreement with NTIS for collection, processing, dissemination of reports and issuance of EPA Reports Bibliography.
1972	NTIS Bibliographic Database (NBDB) goes online with commercial vendor. Leasing agreement is landmark to be copied in later years by other agencies and private sector.
1972	Director states NTIS should continue seeking appropriations for new products and services; attempt to achieve 100% self-sufficiency in on-going programs; and ask GPO SupDocs not to override NTIS publications for the depository library program.
1972	NTIS begins Weekly Government Abstracts (WGA) Newsletters in 8 categories, replacing Government Reports Topical Announcements (GRTA).
1973	NTIS begins charging input processing fee.
1973	NTIS becomes first Federal agency to offer credit billing.
1974	December. GAO rules on NTIS publications which were exempt and non-exempt from provisions of Depository Library Act.
1974	NTIS establishes its Office of Government Inventions and Patents to license patents and collect royalties for their use.
1974	NTIS upgrades to an IBM 360/40 computer.
1974	First Directory of Computerized Data Files and Related Software issued.
1975	NTIS begins considering dissemination of tapes and software after passage of Brooks Act.
1976	GAO studies NTIS' collection process and adequacy of information received from Federal agencies and private sector.
1976	NTIS initiates its international cooperative program in which designated organizations in other countries serve as outlets for NTIS technical documents and collect that country's technical documents for NTIS.
1976	Experimental program established with Economic Development Administration (EDA) to make Federal

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Laboratory know-how readily available to private industry; EDA's University Extension Centers channel industry requirements to NTIS.

1976 Monthly NTIS Tech Notes begins publication in 11 subject areas.

1976 NTIS initiates Journal Article Copy Service (JACS).

1976 NTIS begins experimenting with mailgrams as customer service communication device.

1976 U.S. Patent and Trademark Office, GPO, VA, LC, Social Security Administration, Post Office, Defense Documentation Center (DDC), National Archives and NTIS form Federal Committee for Customer Services.

1976 Agreements with Engineering Index and American Petroleum Institute permit cooperative published searches.

1976 Engineering Index and NTIS develop cooperative training program.

1976 NTIS publishes microthesauri to alleviate retrieval problems in specific subject areas.

1976 Copyright license agreement executed for publication and sale of English translations of articles in copyrighted Soviet sci-tech journals, and cover-to-cover translations with payment of royalty to Copyright Agency of the Soviet Agency (VAAP).

1976 Under agreement with GSA, NTIS establishes the Software Exchange Clearinghouse.

1977 EDA program expanded to Small Business Administration (SBA) field representatives.

1978 OMB issues requirement that NTIS maintain a central index of sci-tech information available from Federal Government as a part of its Federal Policy for dissemination of technical information.

1978 NTIS joins Commerce Cities Project, created in response to President Carter's urban policy directives.

1978 Interagency Council for Minority Business Enterprise and NTIS develop a machine-readable directory of minority business firms in response to Carter minority procurement initiative.

1978 NTIS introduces its Selected Research in Microfiche (SRIM) Index in microfiche and paper form.

1978 Scan Optics, Inc. OCR System 340 installed at the NTIS Computer Center.

1978 NTIS introduces a Federal employee-inventor award, with inventor sharing in royalties.

1978 Agencies sign Interagency Agreements (IAG's) with NTIS permitting foreign filing on selected inventions and negotiations for royal-bearing licenses.

1978 April. NTIS issues contract to COMPUPOWER, Inc. for maintenance of all abstract newsletter subscriptions.

1978 December. NTIS accepts responsibility for operation of the Productivity Clearinghouse.

1978 Unpublished foreign technology generally available from central source in U.S. under reciprocal agreements with foreign government agencies.

1978-9 Domestic Policy Review under White House auspices recommends that NTIS be given responsibility for actively collecting and disseminating foreign technical information of interest to U.S. President asks Congress for funding; appropriations provided for FY 81 to initiate the program.

1979 JACS discontinued in effort not to compete with private fulfillment services and Copyright Clearance Center.

1980 December. Foreign Technology Acquisition (FTA) program launched after approval of appropriations.

1980 Commerce Technical Advisory Board's (CTAB) working group on STI Policies examines role of NTIS and possible alternatives to present operations.

1980 Stevenson-Wydler Act creates Center for the Utilization of Federal Technology (CUFT) to handle patent licensing and specialized applied technology products.

1980 NTIS broadens public access to federally funded or produced databases and software.

1980 Protocol for sci-tech cooperation between U.S. Department of Commerce and Chinese Ministry of Industry initiates NTIS and ISTIC exchanges.

1981 NTIS assumes management of the SSIE database.

1981 After hours ordering instituted by NTIS.

1981	NTIS reviews its operations under requirements of A-76; determines that it is cost effective to retain them in-house.
1981	Assistant Secretary for Communications in Commerce asks the Information Industry Association (ISS) to consider whether the private sector could offer NTIS products. Task Force recommends contracting out entire operation.
1981	IAG with National Science Foundation for operational aspects of the Special Foreign Currency Science Information Program is terminated.
1981	Bureau of Labor Statistics LABSTAT data files become available through NTIS as does the Agricultural Online Access (AGRICOLA); the bibliographic Federal Energy Data Index (FEDEX), and the Integrated Library Systems (LS) software.
1981	Annual Catalog of Government Patents is published for the first time; as is the Directory of Federal Statistical Data Files and Directory of Computer Software.
1981	Library Association Liaison Group established.
1981	May. SSIE ceases operation; NTIS assumes responsibility for database.
1981	NTIS and Institute of Scientific and Technical Information of China (ISTIC) initiate work-study program.
1982	NTIS signs agreement with Japan Information Center of Science and Technology (JICST) to provide abstracts of Japanese technical publications and announce on quarterly basis.
1982	Information for Innovators Newsletter taken over from NTIS by Concep Team, Inc., in New Jersey.
1983	FTA program becomes self-supporting.
1983	Electronic ordering service established.
1983	Federal Research in Progress (FEDRIP) database online through DIALOG.
1983	International Labor Organization (ILO) and NTIS sign agreement for sale of selected ILO publications.
1983	NTIS and International Bank for Reconstruction and Development (World Bank) conclude an agreement to increase availability of World Bank publications through NTIS.
1984	Based on IIA recommendations, NTIS is zeroed out of FY 1984 budget; Commerce reviews task force report appeals to OMB for restoration; OMB approves restoration.
1984	NTIS issues Federal Register notice seeking vendors to distribute technical reports; no responses.
1984	January. Patent, Trademark, Database discontinued by NTIS.
1984	Agreement with Japan's Ministry of International Trade (MITI) signed giving NTIS distribution rights to MITI technical reports.
1984	NTIS joins Commerce, Energy, NASA and Defense Scientific and Technical Information Group (CENDI) to improve productivity of Federal R&D through efficient and responsive technical information cooperation.
1984	"Lock-box" agreement signed with Citizen's and Southern National Bank, Atlanta for deposit of correspondence containing checks and other negotiable instruments for Deposit Account replenishment.
1984	NTIS begins distribution of 5 1/4" floppy diskettes.
1984	Protocol signed between NTIS and the State Scientific and Technological Commission (SSTC) for information exchange.
1984	NTIS experiments with electronic mail for delivery of abstracts and other information.
1984	UNICOR (Federal Prisons Industries, Inc.) prints the Catalog of Government Patents.
1984	NTIS Library ordering program established, with Detroit, Boulder, and St. Louis Public Libraries participating.
1984	Patent Full Text Database included in published search program.
1984	Update Service established to automatically notify recipients of earlier edition or revised version when a new one is issued.
1984	First directory of Federal Laboratory and Technology issued.
1985	Assistant General Counsel for Administration in Commerce issues opinion that NTIS has legal authority to price its products higher than cost,

	provided they are reasonable.
1985	OMB asks Commerce to convene an Industry/Government working group on privatizing NTIS.
1985	JICST and NTIS conclude agreement JICST On-line Information System (JOIS) available in U.S.
1985	First Directory of Federal and State Business Assistance issued.
1985	NTIS establishes a policy to use first class mail for regular service on ordered documents.
1985	CUFT signs memo of understanding of DoC's Training Development Analysis Center (TDAC) to provide new products based on DoD training techniques and video tapes and NTIS' development and marketing skills.
1985	NTIS establishes customer relations team.
1985	Facsimile transmitter ordering initiated.
1985	Foreign patents available for licensing in the U.S. available for the first time.
1985	NTIS institutes $3.00 shipping charge per order.
1985	NTIS makes available forms and instructions for the Federal Reserve System's "Call" Report of Condition and Income; resulting "Call" Income tapes available from NTIS.
1985	Quality circles established at NTIS.
1985	Gale Research Publishing acquires NTIS Report Number Acronym file for publication.
1985	Sales of magnetic data and software tapes break the $1 million mark ($600,000 from sales of 2800 data tapes; over $400,000 in software sales).
1985	NTIS AIDS test kit licenses result in first commercial sales.
1986	NTIS expands Japanese program to include other Japanese government and commercial organizations.
1986	NTIS Bibliographic Database subsets published on CD/ROM under non-exclusive agreement with Digital Equipment Corporation.
1986	QuikORDER service established for deposit account holders.
1986	NTIS holds meeting on privatization.
1986	Express service initiated for orders.
1986	NTIS HELPLINE, bibliographic service desk, is established.
1986	Agreement is signed with Fachinformationszentrum Energie Physik and Mathematik (FIZ 4), Karlsruhe) for the exchange of magnetic tapes, making NTIS database available on the STN International (Scientific and Technical Information Network) operated by Chemical Abstract Service (CAS) and FIZ 4, and making West German government reports available in North America.
1986	NTIS initiates computer-aided cataloging, saving five hours per each 100 documents.
1986	GRA&I goes from 26 issues per year to 24 per year.
1986	EPA/NCC initiates joint venture with NTIS to provide on-line access to environmental databases.
1986	NTIS drops COSATI subject categories in processing and announcing technical reports.
1986	User training on NTIS Bibliographic Database offered in Springfield and at George Mason University (GMU) Library in Fairfax, VA.
1986	May. Account Representatives established to provide personal services to Deposit Account users in Southeastern and Southwestern States.
1986	AID program is discontinued.
1986	Joint energy information and distribution center at Oak Ridge, Tennessee, established with DoE.
1987	OMB directs privatization of NTIS in FY 88 passback.
1987	Federal Applied Technology Databases available on BRS and NewsNet.
1987	H.R. 2160 amends NTIS reauthorization to prohibit privatization pending further study; H.R. 2159, the National Technical Information Act, proposes NTIS become wholly owned corporation under the Department of Commerce; and H.R. 1615 proposes a Government Information Agency.
1987	New Standard Industrial Code Manual available on tape.

1987	April. NTIS receives U.S. Senate Productivity Award.
1987	July. House Science, Research and Technology Committee hold hearings on privatization issues.
1987	NTIS begins public sale of individual bank printouts from Federal Reserve Systems' Reports of Condition and Income.
1987	Defense Logistics Services Center (DLSC) provides NTIS the Defense Integrated Data System (DIDS) Total Item Record (TIR) for release to the public.
1987	Pilot program established with George Mason Institute to provide Japanese technical information to industrial clients who will translate and turn translation back to NTIS.
1987	Users search NTIS database using EasyNet, a gateway service of Telebase Systems, Inc.
1987	In accordance with the Japanese Technical Literature Act, NTIS publishes the Directory of Japanese Technical Resources 1987.
1988	DoE cancels inter-agency agreement with NTIS. On January 6, a notice was issued in the Commerce Business Daily to announce a planned January 29 conference with potential bidders on a contract for performance of NTIS services.
1988	On January 29, a pre-bidders conference was held at the Department.
1988	NIST Authorization Act for FY 1989 (P.L. 100-519) signed October 24, creates new Technology Administration with NTIS as an integral part. This legislation also ended the privatization controversy by ensuring NTIS to be a governmental function.
1988	OTA publishes "Informing the Nation -- Federal Information Dissemination in an Electronic Age" which includes opportunities and challenges for NTIS.
1989	NTIS publishes first annual report with Modernization Plan required by National Technical Information Act of 1988.
1989	IG begins NTIS audit.
1990	IG report on NTIS financial operations is released.
1990	Computer Room fire on December 18 raises possibility of PCBs being released into main production facility in Sills Building. As a precaution, approximately 50 employees and firefighters are decontaminated. Testing by two independent laboratories determines PCBs never present in significant amounts and clears building for re-occupancy on December 26.

* From:
Kadec, Sarah T. "A Brief Chronology of the National Technical Information Service."

CHRONOLOGY OF SELECTED LITERATURE, REPORTS, POLICY INSTRUMENTS, AND SIGNIFICANT EVENTS AFFECTING FEDERAL SCIENTIFIC AND TECHNICAL INFORMATION (STI)

1945 - 1990

Appendix C: Chronology of NASA STI *

1946	Division of Research Information established at NACA Headquarters including the Office of Publications and the Office of Aeronautical Engineering
1950	Index of NACA Publications began; issued in 8 volumes through 1959, covers NACA documents, 1915 -1958.
1951	NACA Research Abstracts began publication, running through 1958; it was quite similar to NASA STAR which was first issued in 1963 as NASA's primary bibliographical publication
1957	Soviets launch SPUTNIK, the world's first artificial earth satellite
1958	Congress passes the National Aeronautics and Space Act, P.L. 85-568, creating NASA as follow-on agency to NACA, and directing that NASA "provide for the widest practicable and appropriate dissemination of information concerning its activities and the results thereof" and to preserve "the role of the U.S. as a leader in aeronautical and space science and technology"
1959	Within a year, NASA absorbs NACA facilities, including their report and library activities, as well as the Jet Propulsion Laboratory, Pasadena, California, and the Army Ballistics Missile Operations Division, which became the Marshall Flight Center, Huntsville, Alabama
1960	STI program established at NASA Headquarters with five operating principles: (1) Provide local access; (2) Centralize only when necessary; (3) Timeliness; (4) Cooperation and collaboration with existing information systems; and (5) Provide a variety of products and services for a variety of user publics
1960	Concurrently, NASA Centers establish STI offices, with authority for issuing their own reports
1960	NASA STI begins issuing the Special Publication Series (SPs) to summarize accurately, for a broad technical audience, NASA's major R&D efforts
1961	The NASA Scientific and Technical Information Facility (STIF) established, to provide a strong central information resource, and to gather, process, and make accessible world-wide aerospace information using computers
1962	In recognition of the need for support for R&D in the life sciences in NASA's aeronautics and space activities, the monthly bibliography Aerospace Medicine and Biology initiated
1963	Scientific and Technical Aerospace Reports (STAR), a computer-generated abstract and indexing journal, issued
1963	Processing world-wide aerospace STI into one database began under contract with American Institute of Aeronautics and Astronautics (AIAA), which also provided continuation of International Aerospace Abstracts (IAA) for the world's open literature (STAR and IAA provide single-source printed coverage of the world's report and open aerospace literature)
1963	NASA STI agrees to NTIS announcing aerospace documents to the public and supplying copies
1964	European R&D results added to the NASA STI database under an agreement with the European Space Research Organization (ESRO), predecessor to the European Space Agency (ESA)
1964	Monthly SDI initiated for NASA engineers and scientists, a personalized computer service
1964	NASA/STI participated actively in COSATI, the interagency group to take advantage of and to help coordinate STI programs that were burgeoning in many agencies
1965	NASA STI, along with NSF, DoD, and NLM began planning and funding the development of advanced information systems and services
1967	NASA Thesaurus issued to coordinate and standardize terminology for entry into the database and for retrieval
1967	National Space Science Data Center (NSSDC) established to serve as a long-term archive and distribution center for data obtained on NASA space science flight investigation
1967	Tech Briefs issued, describing NASA-developed technology of potential application to industry
1967	Management, an annual bibliography began
1969	NASA's online retrieval system RECON, a pioneering step in computer access to STI becomes available to NASA Headquarters, Centers and federal agencies
1970	Aeronautical Engineering, a controlling bibliography, issued semi-annually began reflecting increased R&D in aeronautics
1971	NASA Online Input Photocomposition System (NOIPS) implemented to typeset STAR
1971	NASA, NTIS, and DDC agree to implement 24:1

microfiche reduction ratio

1972 NASA/ESRO Tripartite Exchange Program established, allowing organizations in ESRO member states to access NASA STI

1972 NASA Patent Abstracts issued semiannually

1972 SCAN (Selected Current Aerospace Notices) issued twice a month, providing nearly 200 subtopics profiled by computer

1977 Text search capability made available on RECON (the combination of text (title and abstract) as well as thesaurus term search significantly increase retrieval capability)

1979 Technology for the Large Space Structures, a continuing bibliography, issued semiannually, providing support the Space Station Program

1979 RECON online bibliographical system became available to the entire aerospace community

1981 Dial-in service for RECON initiated for NASA contractors and federal agencies (This took advantage of current communications technology and responded to the Paperwork Reduction Act of 1980)

1983 Began machine-aided indexing--switching indexing terms for items supplied by DTIC and DoE/OSTI to NASA thesaurus terms

1983 NASA joined in the funding of CENDI interagency group including Commerce, Energy, NASA, and Defense to improve productivity of Federal R&D through cooperative STI activities

1983 NASA contributes descriptions of research (RTOPs) for inclusion in STIS's Federal Research in Progress (FEDRIP), made available on DIALOG to U.S. users only

1985 Basic NASA STI files made accessible through a private vendor--Lockheed DIALOG, in line with the responsibility under the Space Act to make STI publicly available

1985 Issued bibliographies covering Japanese, European, and Soviet aerospace science and technology

1986 Applied computer-aided indexing to abstracts and titles of items supplied in electronic form

1987 A state-of-the-art computerized input processing system (IPS) was installed at the NASA STI Facility, for the greater efficiency and control

1987 National-level exchange agreement signed with Israel

1987 The 1915-1958 NACA Headquarters Library Reference collection of worldwide early aviation research began to be made available on RECON (This was in anticipation of saving several million dollars a year in basic aeronautics research not having to be done over again)

1988 National-level exchange agreement signed with Australia

1988 The Aerospace Research Information Network (ARIN) became operational, providing support for the NASA Center and Headquarters libraries network

1989 National-level exchange agreement signed with Canada

1989 On-line document ordering implemented

1990 The 3,000,000th record added to the NASA STI bibliographic database of references to reports, journal papers, conference proceedings, and books, on topics as varied as NASA's mission

1990 The NASA/STI Council formed, composed of senior-level NASA executives to review polices and goals and serve as a bridge to the NASA R&D community

1990 The NASA STI database becomes accessible through the NSSDC Master Directory, combining research access to bibliographic and numeric/image databases

* Prepared by Wilson, John, NASA Code JTT

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CHRONOLOGY OF SELECTED LITERATURE, REPORTS, POLICY INSTRUMENTS, AN SIGNIFICANT EVENTS AFFECTING FEDERAL SCIENTIFIC AND TECHNICAL INFORMATION (STI)

1945 - 1990

Appendix D: Index of Executive Orders

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CHRONOLOGY OF SELECTED LITERATURE, REPORTS, POLICY INSTRUMENTS, AND SIGNIFICANT EVENTS AFFECTING FEDERAL SCIENTIFIC AND TECHNICAL INFORMATION (STI)

1945 - 1990

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CHRONOLOGY OF SELECTED LITERATURE, REPORTS, POLICY INSTRUMENTS, AND SIGNIFICANT EVENTS AFFECTING FEDERAL SCIENTIFIC AND TECHNICAL INFORMATION (STI)

1945 - 1990

Appendix F: Glossary of Popular Names

Report Name	Item Number	Report Name	Item Number	Report Name	Item Number
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Appendix G: Glossary of Acronyms

AAAS	American Association for the Advancement of Science
AAU	Association of American Universities
ADD	Automatic Documentation Distribution
ADI	American Documentation Institute
ADP	Automatic Data Processing
AEC	Atomic Energy Commission
AECA	Arms Export Control Act
AFOSR	Air Force Office of Scientific Research
AFB	Air Force Base
AGARD	Advisory Group for Aerospace Research
AIAA	American Institute of Aeronautics and Astronautics
ALPAC	Automatic Language in Processing Advisory Committee
AMTD	Automatic Magnetic Tape Dissemination
ANSI	American National Standards Institute
ARL	Association of Research Libraries
ARPANET	Advance Research Projects Agency Network
ASTIA	Armed Services Technical Information Agency
BASIC	Beginner's All-Purpose Symbolic Instruction Code
BoB	Bureau of the Budget
BRS	Bibliographic Retrieval Service
BSIE	Bio-Sciences Information Exchange
BSIE	Biological Science Information Exchange
CADO	Central Air Documents Office
CAIN	Cataloging and Indexing
CASI	Center for Aero-Space Information
CATE	Current ARDC Technical Efforts
CBCC	Chemical-Biological Coordination Center
CENDI	Cooperative interagency group
CFSTI	Clearinghouse for Federal Scientific and Technical Information
CIA	Central Intelligence Agency
CLR	Council on Library Resources
CNWDI	Critical Nuclear Weapons Design Information
CODATA	Committee on Data for Science and Technology
CONTU	Commission on New Technological Uses
CORSI	Committee on the Release of Scientific Information
COSATI	Committee on Scientific and Technical Information
COSEPUP	Committee on Science, Engineering, and Public
COSI	Committee on Scientific Information
CPE	Contract Performance Evaluation
CRS	Congressional Research Service
CTAB	Commerce Technical Advisory Board
CUFT	Center for the Utilization of Federal Technology
DARPA	Defense Advanced Research Projects Agency
DDC	Defense Documentation Center
DDR&E	Director of Defense research and Engineering
DED	Data Element Dictionary
DGIS	Defense Gateway Information System
DHEW	Department of Health, Education, and Welfare
DLA	Defense Logistics Agency
DLP	Depository Library Program
DoA	Department of Agriculture
DoC	Department of Commerce
DoD	Department of Defense
DODD	Department of Defense Document
DoDI	Department of Defense Instruction
DoE	Department of Energy
DoEd	Department of Education
DoT	Department of Transportation
DRIT	DDC Retrieval and Indexing Terminology
DROLS	Defense RDT&E Online System
DSA	Defense Supply Agency
DSI	Division of Science Information
DTIC	Defense Technical Information Center
E.O.	Executive Order
EAA	Export Administration Act
EAR	Export Administration Regulations
ECA	Economic Cooperation Administration
EDA	Economic Development Administration
EDB	Energy Data Base
EDVAC	Electronic Discrete Variable Automatic Computer
EJC	Engineers Joint Council
ENIAC	Electronic Numerical Integrator and Calculator
EOP	Executive Office of the President
EPA	Environmental Protection Agency
ERDA	Energy Research and Development Administration
ERIC	Educational Resources Information Center
ETDE	Energy Technology Data Exchange
FAA	Federal Aviation Agency
FAA	Federal Aviation Administration
FACSI	Federal Advisory Committee on Science Information
FCCSET	Federal Coordinating Council for Science, Engineering and Technology
FCST	Federal Council for Science and Technology
FEDRIP	Federal Research in Progress
FLC	Federal Library Committee
FLICC	Federal Library and Information Center Committee
FLRP	Federal Laboratory Review Panel
FOIA	Freedom of Information Act
FTA	Foreign Technology Acquisition
GAO	General Accounting Office
GIQ	Government Information Quarterly
GOCO	Government-Owned contractor-Operated
GPO	Government Printing Office
GRTA	Government Reports Topical Announcements
GSA	General Services Administration
HUD	Housing and Urban Development
IAC	Information Analysis Centers
IAG	Interagency Agreements
ICSI	International Conference on Scientific Information
ICSRD	Interdepartmental Committee on Scientific Research and Development

CHRONOLOGY OF SELECTED LITERATURE, REPORTS, POLICY INSTRUMENTS, AND SIGNIFICANT EVENTS AFFECTING FEDERAL SCIENTIFIC AND TECHNICAL INFORMATION (STI)

1945 - 1990

Appendix G: Glossary of Acronyms

ICSU	International Council of Scientific Unions
IDEP	Interdepartmental Data Exchange Program
IIA	Information Industry Association
IIT	Illinois Institute of Technology
ILO	International Labor Organization
IMSE	Interagency Material Science Exchange
INTERNET	Interactive Network
IOM	Institute of Medicine
IR&D	Independent R&D
IRM	Information Resources Management
ISETAP	Intergovernmental Science, Engineering, and Technology Advisory Panel
ITAR	International Traffic in Arms Regulations
JACS	Journal Article Copy Service
JCP	Joint Committee on Printing
JICST	Japanese Information Center for Science and Technology
JOIS	JICST Online Information Systems
LC	Library of Congress
LRS	Legislative Research Service
MAI	Machine-Aided Indexing
MATRIS	Manpower and Training Research Information System
MCA	Main Console Assembly
MEDLARS	Medical Literature Analysis and Retrieval System
MEDLINE	MEDLARS Online
MIT	Massachusetts Institute of Technology
MITI	Ministry of International Trade Industry
MOU	Memorandum of Understanding
NACA	National Advisory Committee on Aeronautics
NAE	National Academy of Engineering
NAL	National Agricultural Library
NARA	National Archives and Records Administration
NAS	National Academy of Sciences
NASA	National Aeronautics and Space Administration
NASA STIF Facility	NASA Scientific and Technical Information now NASA CASI-Center for Aero Space Information
NASA OSTI	NASA Office of Scientific and Technical Information
NATO	North Atlantic Treaty Organization
NBDB	NTIS Bibliographic Database
NBS	National Bureau of Standards; now NIST
NCLIS	National Commission on Libraries and Information
NDEA	National Defense Education Act
NEPA	National Environment Policy Act
NFAIS	National Federation of Abstracting and Indexing
NFSAIS	National Federation of Science Abstracting and Indexing Services
NIST	National Institute of Standards and Technology
NLM	National Library of Medicine
NOAA	National Oceanic and Atmospheric Administration
NRC	National Research Council
NREN	National Research and Education Network
NSA	National Security Agency
NSDD	National Security Decision Directive
NSF	National Science Foundation
NSFNET	National Science Foundation Network
NSRDS	National Standard Reference Data Systems
NTIA	National Telecommunications and Information Agency
NTIS	National Technical Information Service
OARS	OSTI Automated Retrieval System
OASD/FM&P	Office of Assistant Secretary of Defense/For Management and Personnel
OCLC	Online Computer Library Center
ODDR&E	Office of the Department Director for Research and Engineering
OIRA	Office of Information and Regulatory Affairs
OMB	Office of Management and Budget
ONR	Office of Naval Research
OSI	Office of Scientific Information
OSIS	Office of Science Information Service
OSR	Office of Scientific Research
OSRD	Office of Scientific Research and Development
OST	Office of Science and Technology
OSTI	Office of Scientific and Technical Information
OSTP	Office of Science and Technology Policy
OTA	Office of Technology Assessment
OTS	Office of Technical Services
OUSD/R&E	Office of the Under Secretary of Defense /Research and Engineering
P.L.	Public Law
PB	Publications Board
PCST	President's Committee on Science and Technology
PSAC	President's Science Advisory Committee
R&D	Research and Development
RADCAP	R&D Contribution to Aviation Progress
RANN	Research Applied to National Needs
RDB	Research and Development Board
RECON	Remote Console
RIP	research in progress
RSAG	Research Sharing Advisory Group
S&T	Science and Technology
SAIS	Standard Aeronautical Index System
SATCOM	Committee on Scientific and Technical Communication
SBA	Small Business Administration
SBIE	Shared Bibliographic Input Experiment
SBIR	Small Business Innovation Research
SCATT	Scientific Communication and Technology Transfer
SDC	System Development Corporation
SDI	Selective Dissemination of Information
SIC	Science Information Council
SIPRE	Snow, Ice, and Permafrost Research Establishment
SPRD	Science Policy Research Division (of the CRS)
SRI	Stanford Research Institute
SSIE	Smithsonian Science Information Exchange

SSTC	State Scientific and Technological Commission
STI	Scientific and Technical Information
STINFO	Scientific and Technical Information
STIP	Scientific and Technical Information Program
Sup/Docs	(U.S. Government Printing Office) Superintendent of Documents
TAB	Title Announcement Bulletin (later Technical Abstract Bulletin)
TDAC	Training Development Analysis Center
TDD	Technical Data Digest
TEST	Thesaurus of Engineering and Scientific Terms
TIS	Technical Information Service
TNS	Technical News Service
TPS	Text Processing System
TRAC	Technical Reports Awareness Group
TRACES	Technology in Retrospect and Critical Events in Science
UMI	University Microfilms International
UNESCO	United Nations Educational Scientific and Cultural Organizations
UNISIST	World Information Network sponsored by UNESO and ICSU
UNIVAC 1	Universal Automatic Computer
USDRE	Under Secretary of Defense, Research and Engineering
USGRDR	U.S. Government R&D Reports
WGA	Weekly Government Abstracts
WHCLIS	White House Conference on Library and Information
WUIS	Work Unit Information System
WWI	World War I
WWII	World War II

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13. ABSTRACT *(Maximum 200 words)*

The chronology is a comprehensive bibliography. It contains 512 entries covering a variety of selected literature, reports, policy instruments, and significant events affecting Federal Scientific and technical information (STI) from 1945–1990. It includes some publications and events of historic interest which relate to the evaluation of aerospace and aerospace knowledge diffusion. Each entry has been given an item number and items are arranged by columns. To provide an overview of Federal STI development, the entries are generally arranged by date of publication and event. Specific information, including the year of the event, report, or policy instrument; the author; bibliographic number; and sponsor are included. Comments regarding the major findings, recommendations, or significance have been added for each entry. The chronology has seven appendices. Appendix A is a chronology of the DTIC. Appendix B is a chronology of the NTIS. Appendix C is a chronology of NASA STI. Appendix D is an index of Executive Orders. Appendix E is an index of Public Laws. Appendix F is an index of popular "common" names for studies. Appendix G is a glossary of acronyms.

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